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U.S. Navy Medicine

February 1976

**Look sharp! It's National
Children's Dental Health Week**

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COVER: Peering intently over the edge of a towel, a young Navy dependent studies an approaching dental mirror. It's all part of National Children's Dental Health Week in the Dental Department aboard the USS *New Orleans* (LPH-11). More reports on page 31 and the back cover.

PA Program Under Fire

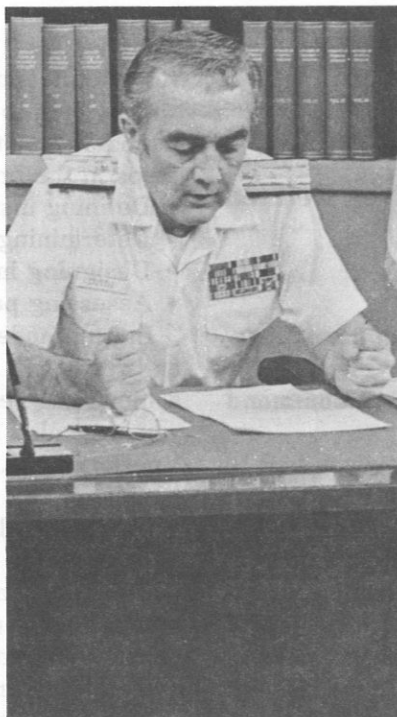
At this writing news will have reached the field that, in accordance with an OSD decision, our resources to make further input into our physician assistant training program have been decremented. It is not, however, the last word to be heard, since the program is to remain under study for further policy guidance. In the interim recruitment of civilian-trained PAs is authorized, the merits of which have yet to be tested.

This hindrance is in no way a reflection on the high quality of performance by PAs currently on duty within the three services. As paraprofessional members of the Navy health care delivery team, they are consistently well received by patients. They have proven their worth in extending the effectiveness of the scarce primary care physician.

I address the issue here to reassure our personnel, to reaffirm our conviction as to the need for the Navy PA, and to describe the current confused status of the program.

Since its origin the military PA Program has been clouded with controversy and misunderstanding. Criticism has been leveled that in-service training of PAs is not cost effective, and that the three medical services are inconsistent in their curriculum content, their methods of utilizing this type of paraprofessional, and their rate or grade assignments.

The wide variance in quality, acceptability, and legal status of civilian-based PAs has, by association, been prejudicial to those surveying our program. Unfortunately, the military PA has himself contributed to his tenu-



ousness by his early demands for greater recognition and expanded career opportunities and awards. The job proximity of the commissioned nurse practitioner has encouraged such unrest.

In spite of our insistence that conceptionally the PA was to be a physician extender and not a substitute for the general medical officer, budget analysts persist in equating and comparing the two. As a result, medical officer billets have been sacrificed to accommodate for PA billets. The specious argument is still

heard that since physician recruitment is now more promising, the PA Program has lost its justification.

All in all, the protracted struggle to maintain program authorization has been frustrating. The three military medical services will continue to seek options for revitalizing the program. OSD approval in principle has been given for a renewed effort, hopefully to develop single-site, tri-service PA training, to resolve grade difference, and to provide comparability in expanded utilization and career pattern. Instruction may well come under the auspices of the new Uniformed Services University of Health Sciences.

One final observation can be made. When any phase of military medicine comes under extramural attack, nothing gives more credence and quarter to the challenger than tri-service disunity and intraservice contention over the issue at hand. That our experience to date with the PA Program is a case in point would seem quite clear. Whether collectively we learn from it is somewhat less than sure.

Surgeon General of the Navy

The Surgeon General's Seventh Annual Specialties Advisory Conference and Committees' Meeting

THEME

Graduate Medical Education:
Individual and Institutional Proficiency,
Evaluation, and Accountability

SECOND PLENARY SESSION 10 SEPTEMBER 1975

"Definitions and Glossary of Educational Terms, Concepts, and Objectives Related to Specialty Training"

CAPT D.M. Gragg, MC, USN
Head, Educational Programs Development Dept.
Curriculum Division
Health Sciences Education & Training Command

My objective this morning is to show you how to improve your educational programs by applying certain basic concepts. Most of you already, implicitly, employ many of these concepts. But until you understand and *explicitly* use them, your interns and residents may not get the most out of your program. Also a systematic design process based on these concepts will facilitate assessment and control of your programs, and will improve communication with trainees, staff, and colleagues concerning program goals and structure. In short, these concepts are tools to use in upgrading the quality of your training programs.

What are these concepts I'm talking about? And

SAC 7 was held 8-12 September 1975 in Arlington, Virginia. The first plenary session was reported in the January 1976 issue of *U.S. Navy Medicine*. The third and final part of this report will appear next month.

This report is an edited (sometimes paraphrased or abbreviated) version of the remarks and presentations of specified individuals. Their comments do not necessarily reflect official views of the Navy Department, or the naval service at large. [Ed.]

what is this "systematic design process"? It's really quite simple.

I'm going to describe four concepts which form a model of the teaching-learning process. The four steps in the process are:

- Defining instructional objectives;
- Determining entering behavior;
- Designing instructional procedures; and
- Assessing performance.

In our model, an instructional objective is an end-result of performance, not the means of achieving the end-result. In discussing objectives, you may also hear the terms "behavioral" and "performance." Basically, these are just different names for this concept.

Instructional, behavioral, or performance objectives all refer to your desired end-result. These end-results can be classified as *cognitive*, *psycho-motor*, or *affective*. Thinking of objectives in these terms helps ensure that all aspects of education and training are covered.

Cognitive objectives relate to knowledge and to the more complex intellectual functions, such as judgment. A cognitive objective which might apply to a graduate medical education program is: Given a patient with two established diagnoses, the resident will be able to predict the potential effects of one of the diseases upon the manifestations and management of the other disease.

Objectives which define manual skills, such as performing a bronchoscopy, are termed "psycho-motor." Of course, it's recognized that these manual skills cannot be properly performed without background knowledge.

Affective objectives relate to attitudes and their manifestations. For example, an affective objec-

tive which I believe should be included in all graduate medical education programs is: Physicians will refer to patients as people, rather than as disease entities.

Regardless of whether the objective is cognitive, psychomotor, or affective, it is a communication tool. The objective must be specific enough to mean the same thing to the educational manager, the instructor, and the trainee. So in forming objectives, avoid generalities. If possible, define an objective in terms of a single result. An excellent aid to writing instructional objectives is a small, entertaining booklet, "Preparing Instructional Objectives," by Robert F. Mager.

No matter how much effort you put into defining the objectives of your program, as you see them, the design process will fall short of its goal unless these objectives are consistent with the student's own objectives. There must be room in the overall program for the individualization of objectives through negotiation with each intern and resident.

This process of negotiating objectives with the trainee leads us to the next step in our teaching-learning model: determining entering behavior. To give you an example, say I have a friend whose objective is to be in New York City. He looks around and sees that he is now in Washington, D.C. His present location, in Washington, is his entry point en route to his objective.

In our model, entering behavior describes the trainee in relation to previously defined objectives. It encompasses such things as what the trainee has previously learned, his intellectual ability, and his motivational state. It is his profile as a learner in your program.

Once my friend determines that he is in Washington, D.C., he starts thinking of how he can get to New York. There are various modes of transportation, but he has to consider them all in terms of availability, convenience, and cost. This analytic process is analogous to the next component of our teaching model: designing instructional procedures. This component consists of the methodologies of the teaching-learning process.

The first step in determining procedures is to arrive at a set of instructional requirements. This is done by assessing the discrepancies between the individual's entering behavior and the objectives. The nature of the objectives and the instructional requirements are used to determine how much and what kind of instructional procedures are to be utilized. There are, of course,

many different procedures: the teacher as a role model, formal lectures, self-study, clinical conferences, simulation, and actual performance of tasks under supervision. The proper combination of these procedures results in behavioral change which we call "learning."

The final concept of our model is assessing performance to determine whether the student has achieved the instructional objectives. My friend, for example, would look around and see that he is now in New York City. His objective has been achieved.

To assess performance relative to an objective, the objective statement must include not only an end-result but also a criterion for determining when that end-result has been achieved. For example, an objective with stated criterion might be: Perform an uncomplicated appendectomy in less than 60 minutes using techniques judged to be acceptable by an expert in general surgery. This objective has two criteria of acceptable performance, one relating to time (less than 60 minutes), the other concerning quality (using techniques judged to be acceptable by an expert in general surgery).

Assessment based on objectives which include criterion statements is called "criterion-referenced evaluation." A common but less desirable type of assessment is "normative-based evaluation,"—determining an individual's performance relative to that of his peers. This type of assessment leads to such descriptors as "best," "above average," "in the top third." It fails to tell us whether or not the student has achieved his objective.

This basic teaching-learning model facilitates the documentation of an instructional system. The diagnostic process is analogous to this instructional system. In diagnosis, the objective is to determine the illness. The patient's medical history parallels entry behavior. The physical examination and laboratory studies are equivalent to the instructional procedures. Finally, the performance assessment judges whether, upon follow-up and treatment, the diagnosis proves to be correct.

You, your instructors, and your students intuitively follow this logic in your daily instruction and practice of medicine. But until you document and scrutinize your instructional system, as you do in the diagnostic process, you will not be sure of what is actually going on. And you will not be able to improve your system.

"Update of USUHS: Progress, Objectives, Evaluation, and Navy Program Interfaces"

Jay P. Sanford, M.D.
Dean of the Medical School
Uniformed Services University of
the Health Sciences

I know most of you are fully familiar with the Uniformed Services University of the Health Sciences, and with some of its objectives. But I would like to review very quickly with you certain background material. The law which established the Uniformed Services University, Public Law 92-426, was passed in September 1972. Certain major criteria were written into this law to establish the working relationships that the University will have. The law established or defined that the University would be established within 25 miles of the District of Columbia. The law also established that the University would be managed by a Board of Regents, appointed by the President of the United States with the advice and consent of the Senate. This Board of Regents would consist of nine civilians who are outstanding in the area of medical education and health resources. In addition, there would be a number of ad hoc members: the three Surgeons General, and the Secretary of Defense or his representative. Today that representative is the Deputy Assistant Secretary of Defense for Health and Environment.

University students will be commissioned as O-1's. The University itself is defined as "being comparable with institutions of higher learning." The other criteria are that there must be 100 graduates by 1982, and that the University must actually be a uniformed services university, to include individuals in the Public Health Service, so that it is not limited specifically to candidates from the three armed services.

It is against this background that developments have taken place. The University was established through directives as a separate agency within the Department of Defense, managed by the Board of Regents, and reporting to the Secretary of Defense through the Deputy Secretary of Defense.

One question that comes up frequently is, Is there anything unique about this University, or is this merely another medical school? In fact, since mid May 1975, we have spent considerable time and effort trying to counter arguments raised against the cost of the University. I think it only

fair to say that in all arguments thus far the issue has been cost. We've been given very little opportunity to talk about what we plan.

There are certain aspects that are unique in terms of medical requirements for the military physician. You recognize these, I'm certain, far better than I do. You also recognize that today within the civilian medical schools many of these aspects receive very brief attention. Medical school curricula are already very full. Also, the number of faculty members prepared to be enthusiastic and knowledgeable in these areas is dropping rapidly. In fact, one of the objectives of the USUHS School of Medicine is to maintain a nucleus of such expertise.

Just to mention a few of the issues that make special demands on military physicians: tropical medicine, global medicine, problems of adaptation to adverse environments, such as altitude, cold, prolonged isolation. Those of you who have had operational interactions with Operation Deepfreeze know many of the problems associated with that particular activity. Other problems include the effects of nuclear weapons and radiation. I suspect that few medical schools place any emphasis today on these areas. However, in our own curriculum, we have a mandate to emphasize just this training.

The major objective of the USUHS is to train outstanding physicians who are dedicated to careers in military medical service. This certainly is what I was recruited to do; it's what I'm dedicated to do. This involves a whole series of interactions, beginning with the identification of interested students, selecting students with these career goals, and providing them with the resources and environment that will enable them to develop into the type of physician the military services need. We then have the objective of providing these physicians with continuing education throughout their career.

We anticipate receiving 4,000 to 5,000 applications for our charter class of 36 to 40 students. So our problem is how to select these outstanding individuals from so many applicants. We're fortunate in having close collaboration with the Department of Defense so we can obtain some computer assistance to keep track of them. This will also help us analyze such information as the composite score based on grade point averages, and weighted grade point averages.

We anticipate that some students may have had a little trouble in their freshman year, but then

progressed satisfactorily. In order not to penalize those individuals, we can combine this with their medical college aptitude testing scores, and be able to look at them as an entire group. We can also review candidates by geographic location, by active duty military service, and so forth, and so sort through this group of individuals until we select a group of approximately 400 individuals whom we will then interview. And this is where we interface directly with many of you.

It's obvious that interviewing 400 candidates poses a serious difficulty. We're fortunate to have an outstanding young educational psychologist with us whose doctorate is in Selection Processes. He has been on active duty with the Army in selecting medics, and he is helping us to develop a standardized interview format. We anticipate asking those of you in the Washington area to assist us in interviewing. We also anticipate interviewing candidates in the San Antonio and San Francisco areas.

Our initial objective is to recruit top quality, career-motivated individuals. Once we identify these individuals, we have the various directives that are necessary to commission them. We actually have the same commissioning requirements for each of the four services: the Navy, the Army, the Air Force, and the Public Health Service. Prior to this, requirements differed for the four services, but we've been able to get agreement as to uniform commissioning requirements.

We anticipate bringing the students on board in mid August 1976. Their first weeks will actually be indoctrination into the military, telling them what are they expected to do and how are they expected to function as officers. We anticipate that these students will attend class in uniform.

We've begun to look at the curriculum. In fact I have here a proposed curriculum, with objectives, goals, and the means to approach them. The faculty board has not yet reviewed this curriculum, and it will obviously be modified as we recruit faculty members who may differ with some of the original ideas. However, this does give us, in writing, what we believe the educational objectives of the USUHS should be, and proposes a way to meet them.

This curriculum is fairly traditional. It certainly is traditional in that it is representative of the curriculum in which many of you participated. It includes a fair amount of time spent in laboratory endeavors, something which has been deleted

from many medical school curricula today. Time is also devoted to such areas as ethics, the history of medicine, military medicine, and certain areas that are very specific to military medicine.

We have also built into the curriculum something that we've termed "applied physiology." For example, if one starts to talk about gas laws and the influence of pressure, I know of no better way to prove a point than to put scuba gear on somebody, put them down 33 feet, and let them see what happens. This capability exists in the Washington area, and we propose to take advantage of it.

The first group of students will be with us from 15 August 1976 until approximately 15 June 1980. That gives us 46 months; but assuming a certain amount of leave, we end up with 42 months of actual academic involvement—six months more than the usual four years offered at civilian medical schools.

We propose to offer structured electives during the summer months. Between the freshman and sophomore years, for example, the students would spend approximately 11 weeks on duty with a line unit of their parent service to learn what the military is all about. Between his sophomore and junior year, following basic science training, a student might spend time in a specialized medical unit, such as the Naval Medical Research Institute. If the student's interests are in microbiology, in preventive medicine, in physiology, he can be exposed to opportunities which are unique within the military services. And between the third year and fourth year the same opportunities, as well as clinical electives, will be available. We propose that the first three years will be fairly nonelective, with the fourth year having a moderate amount of elective time.

We plan to offer approximately three months of training in family practice. There are approximately ten centers with family practice programs in the three services. By distributing the students among them, we can provide them with this experience without decimating the teaching program in any one of these centers.

We also anticipate students spending specific amounts of time in anesthesiology and emergency medicine, which will probably require the assistance of civilian support.

This, in general, is the curriculum as we envision it at the present time. But the University is certainly no stronger than its faculty. It may be *weaker* than its faculty, but it certainly can be no

stronger. At the present time, we're somewhat in a holding pattern on faculty. As most of you know, on 16 May 1975 a report was issued by the Defense Manpower Commission. This is not an agency of the Department of Defense, but a commission appointed by the President and Congress. That commission recommended that the USUHS should be dropped because it was both too expensive and unnecessary. We've had to spend a great deal of effort countering these arguments, all of which evolve around the issue of cost. Product quality is not involved in any way.

As a result, it's very difficult to recruit the faculty that we would like within the basic sciences. We have search committees appointed. These search committees will begin meeting so that as soon as we know about our future viability, we will be prepared to move ahead. We do anticipate being able to obtain an excellent faculty. The enthusiasm on the part of individuals wishing to join this faculty, both civilian and within the services, is really most rewarding.

For the position of chairman of the Department of Medicine, 176 individuals were reviewed by a search committee which consisted of three civilians and two military officers. Their recommendations were approved by Dr. Curreri and the Board of Regents. We hope to move in that direction.

There is similar enthusiasm in the basic sciences. I think we've got the potential for recruiting one of the best faculties in any medical school in this country. I know personally of a number of people who would like to be here.

So we're talking about a great opportunity. But it's a great opportunity only if we have the wholehearted support of each of you. We're not going to be looking at a group of ivory tower investigators. Our purpose is to provide physicians to be sure that military medicine, and the Navy Medical Department, is as good as it can be.

"Realities of Integrated House Staff Training Programs"

James E. Eckenhoff, M.D.
Dean, School of Medicine
Northwestern University

I'd like to talk with you about an integrated house staff training program. And I thought that it might be most instructive to describe what has

gone on, and is going on, in our own medical center at Northwestern University. You will see that there are many educational situations that are common to all hospitals, regardless of the sponsoring agency.

To place this in perspective, the medical center of Northwestern University is a group of affiliated hospitals. Northwestern University Medical School itself is about 115 years old. Until 12 years ago we did not have a single paid physician to teach students. Our clinical instruction was accomplished through volunteer faculty who taught as an avocation. We have changed during the last few years until a significant portion of the faculty are full-time, salaried individuals. However, I stoutly defend a system that encompasses a large number of volunteer faculty. If the full-time faculty is the skeleton of an effective program, the volunteer faculty fleshes out that skeleton.

In 1966, when I first went to Chicago, there were two general private hospitals—a Veterans Administration Hospital and a Rehabilitation Institute—all clustered immediately adjacent to the medical school on the lakefront near a water tower. To the north, some 15 minutes away by automobile, there is Children's Hospital, and further north, about 35 minutes away in suburban Evanston, there's another private general hospital. In all, there are 2300 beds in this medical center, generally about 80% to 85% occupied. All the institutions have active ambulatory services.

Medical students were trained at each of these hospitals. There were residency training programs representing 18 specialties, each program oriented to its specific hospital; no program was necessarily concerned about or interested in the programs of another hospital.

Staff members did not rotate among the hospitals. In fact, with hospitals located directly across the street from each other, staff members were forbidden at one time to walk across the street to see a patient. That happened only 12 years ago.

The chairmen of the departments in the medical school and in the clinical departments were primarily responsible for ensuring that the medical students rotated through the services of the medical center. But they had nothing to do with the day-to-day care of patients in the hospital (except when the chairman was also the chief of service in one of those hospitals; but most hospitals had search committees for the chief of service

SAC 7: Second plenary session speakers



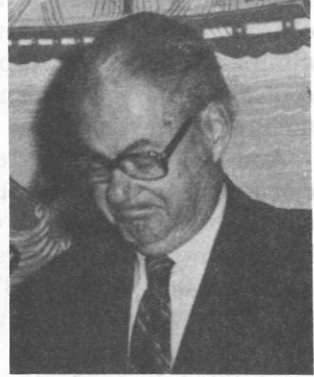
Dr. Sanford



Dr. Nelson



CAPT Gragg



Dr. Eckenhoff

that were completely independent from the chairman of the department in medical school).

Around 1964 or 1965 the hospitals banded together to form the medical center, and established a Medical Center Board. The Board really had no power to make any of the affiliated institutions do anything. It was comprised of two members of the Board of Trustees who tried to settle various problems.

Things began to change in 1965 with the appointment of a new chairman of surgery who came from Cornell Medical School and was used to a good training program. He insisted on being named chief of surgery at two of the downtown hospitals.

One year later I joined the medical center as chairman of anesthesia, and I made a similar request. Both of us, perhaps in our innocence, accepted residents and freely moved them from one hospital to another. A few eyebrows disappeared into hairlines when we dared to do this. And once a president of the hospital said to me, "Do you realize that you've got residents on duty in this hospital who have never been approved by our Medical Education Committee, and who have never been approved by our Board of Trustees?" I said, "Well, I thought that once you were accepted into a department in this medical center, you were free to move among the medical center's hospitals." But such was not the case.

Nevertheless, we continued to move our residents around. Periodically the phone would ring, and we'd get the devil about doing this incredible thing. But it soon became apparent that there was some merit to this practice, and the Board of Trustees decided to take another look at

this question. So they finally said yes, residents ought to be accepted into a medical center-wide program and ought to rotate freely; and no, each institution should not have its own independent program.

But as soon as we began to rotate residents with greater freedom, we suddenly came upon a real snag: fringe benefits. We had agreed to give equivalent salaries for residents in all of the institutions. But before long the residents were complaining bitterly that one hospital had apartments to offer residents, and another hospital did not; or that one hospital provided meals only for residents, while another provided meals for residents, and let them bring their families or friends. Probably one of the biggest problems was parking—some hospitals provided parking, others didn't.

It became apparent that if we were going to rotate residents freely throughout the center and really have an integrated house staff program, we were going to have to offer equivalent fringe benefits. That is where our integrated health staff program really got started.

Interestingly, the Board of Trustees understood fringe benefits far better than physicians, from a monetary point of view. They decided to upgrade the board of the medical center, to hire an executive vice-president, and to establish a planning office. So they hired the best in the country, Ray Brown, previously of Duke University and Harvard. He was a man of great ability, and we all mourned his death last year.

Next the Board of Trustees decided to make one individual responsible for graduate medical education. And with the agreement of the univer-

sity, it was decided that this individual would be an associate dean for graduate medical education. He would be housed in the medical school. His charge would be to oversee the administrative affairs of the house staff programs. He would also centralize the records and standards for enrollment of residents.

And recognizing, as administrators do, that clout comes from the source of the money, the trustees decided that all checks would be issued by Northwestern University. This decision was made in 1969. In July 1970 all residents, for the first time, were enrolled with the associate dean, and since that date every house staff position has been filled through the office of the associate dean.

Running this office costs approximately \$100,000 a year. The associate dean continues to practice and to work for the university as well as for this unit, so he has other sources of salary. But the office requires a coordinator, in addition to the departmental assistant and three secretaries.

There are 517 residents throughout these hospitals. The total budget is \$7,160,000 a year. That includes all of the fringe benefits. I don't know if you've ever stopped to consider the cost of graduate medical education in this country. It is just shy of a billion dollars each year: roughly about \$850 million. That may sound high, but when I point out that our 517 residents in our one institution cost \$7 million, you can see how such a large cost accrues.

Payment by the various institutions was prorated based on the number of residents at each hospital.

Even after we put this together, it took two years to equalize among the various institutions the fringe benefits that I've been talking about. Free meals had to be discontinued and each resident had to be paid enough to compensate for those meals. Now, if a resident brings his family in, he must pay for them.

Free housing also disappeared, and again the residents were reimbursed.

The last thing to surface was health examinations for the house staff. We found that these examinations, even equalizing the cost of individual items among the institutions, varied from \$45 in one institution to \$80 in another. One institution says, "We've got to do an EEG on every resident." Another says, "No, we don't think we need that." One has to have an SMA 18, while another is satisfied with an SMA 12. We are trying

to get all this straightened out, but it has taken endless hours of negotiation.

The second thing we found was that some of the hospitals were unwilling to accept residents they had not personally selected. It just shows how little confidence some physicians have in accepting the judgment of others. For nearly two years we fought the attempts of individual hospitals to retain the right to veto any individual. That is finally settled. A list of residents comes from the associate dean, accompanied by a list of rotations among the hospitals. The lists go directly to the Board of Trustees of these hospitals, where they are automatically approved.

The third and perhaps the most interesting thing we found was conflict in some of the practices of program directors in accepting residents. Despite the existence of the matching program, we were surprised at how often program directors would accept a resident from outside the match. We were surprised at how often a resident was accepted by negotiation; specifically, beneath the table negotiation. It was interesting to discover how often a friend of the program director would call and say, "Joe, you've got to take this guy," and the director would take him.

We found that one factor that influenced the acceptance of residents was the travel of the program director. Very often we found that when a program director was in Istanbul, Australia, Thailand, Japan, or wherever—particularly after a cocktail party—he would be inclined to say to his host, "Sure, I'll take your student." And three or four months later the student arrives on the scene, and you suddenly find he doesn't speak very good English. Well, it has taken some time to nail that one down. Now the chairmen or the program directors realize that they have to go through channels. Residents no longer can be accepted by fiat by a single individual; rather their credentials are studied in their entirety.

The fourth thing that became apparent after the second or third year was that the associate dean had become a fall guy. When the residents would complain to the program directors, they were told, "Go see the associate dean about it; that's his problem." And the associate dean was besieged with people complaining about trivial problems.

Also, for the first time, the enormous differences in the capabilities of residents accepted by the various programs became evident. The standards in one department were high, while another department was happy just to have a

warm body. But when the internists, the surgeons, and the pediatricians began to look over the shoulders of the ophthalmologists, the anesthesiologists, and the psychiatrists, things began to change. Program directors realized that they were now being observed by their peers, and that they had better do something to improve their programs. But centralization of all programs was required to really smoke that problem out.

We also found that some programs offered attractions not available in others. For instance, some departments were quite willing to provide funds for the residents to go to a national meeting once a year. Other departments couldn't afford it. So we had to develop a standard practice whereby every resident, after the first year of training, is entitled to go to a meeting.

Another problem we looked at was night and weekend duty. In some programs, no residents are on duty during the night or on the weekend; in other programs, they're on duty every second or third night.

One of the big problems, as you might suspect, was moonlighting. Some departments condoned it; some forbid it. I suspect that interest in moonlighting may have been curtailed this past year when one of our residents who was moonlighting without anybody's knowledge got caught. He's been named in a malpractice suit, but he doesn't have malpractice insurance unless he's practicing inside of our medical center.

I don't know how many of you realize how widespread moonlighting is. I'm told that in one institution in Texas two senior residents maintain an aircraft, and have a service, and will fly anyone who wants to moonlight as far as 500 miles. The hospitals involved pay the costs of maintaining the airplane and pay a fee—a head fee, I guess—to the enterprising senior residents. They also pay a handsome fee to the moonlighting residents.

We've attempted to bring the problem of moonlighting under control, but I don't know how successful we've been.

We also began to realize how many program directors had made private arrangements with other institutions to furnish residents with no legal protection for the residents nor for the medical center. And the other institution didn't provide malpractice coverage, either.

We also found out that in one program it was possible to get a certificate of proficiency in a specialty from Northwestern University without ever having been in Chicago.

Probably the most amusing thing we smoked out appeared when we began to look at the charges that were levied against Blue Cross and Blue Shield coverage for the residents. We looked at each department's Blue Shield charges, and found that over 90% were from one department. And interestingly, the charges were against the residents in the psychiatry program. Can you guess what was going on? When we investigated, we found that the psychiatry residents were charging their personal analysis against Blue Shield. Apparently everyone had to go through a personal analysis, so they simply charged it against Blue Shield. Well, we got that straightened out by insisting that any charge for analysis had to be countersigned by the chairman of the Psychiatry Department, who was dead set against this practice.

We also finally made the chairmen realize that they had to look at the residency training programs in all medical center hospitals. They could no longer divorce themselves from the hospitals where they were not chief. They had to look horizontally across the system. And one of the first things that the hospital Board of Trustees recognized was that they had to turn to the chairmen of the departments and to the dean of the medical school to help with the responsibility of appointing chiefs of service in each of the institutions. So now the appointments go through the dean's office. Also, of great importance to the Veteran's Hospital, every chairman is now responsible for his service in the V.A. Hospital.

Finally, we suddenly realized that a significant difference in pay had developed between residents paid by the hospital and fellows, most of whom were attached to departments or in the medical school. The fellows had a straight stipend, with no fringe benefits. This led to a very significant problem, which has not yet been solved. Some departments have had to come up with the money to supply the fringe benefits and equalize the salaries of their fellows.

Now, as all of this was going on, we also managed to combine two of these private hospitals. As VADM Custis will tell you from his own experience in Chicago, it is a major coup to combine into one institution a 600-bed hospital and a 400-bed private hospital. But this has been accomplished.

We've also put up a new Rehabilitation Institute, a new Woman's Hospital, and a new Psychiatric Institute. The Woman's Hospital and

the Psychiatric Institute have been incorporated into one large general hospital, a private hospital, with about 1,250 beds. Everybody is convinced that you have to centralize for the sake of efficiency and economy, not only in operation of the hospital but in the educational programs.

Most of our faculty are on the staff of the hospital, and are volunteer faculty. Surprisingly little difficulty was encountered until we began to talk in terms of geographic relocation of the services—moving medicine into all of one of the pavilions, moving surgery into all of another, putting neurology, and ear, nose, and throat into another. We were changing things that had existed for 50 years, ever since the hospitals were built. The people concerned had their own vested interests in each of these places, and they weren't about to move.

In 1973, because so many of these problems had surfaced, it became apparent that we needed to form an impartial group to survey all the house staff programs. So an ad hoc committee was formed with four civilians, six faculty members, and four trustees of institutions. They were to look at all of the residency training programs, and to interview the chairman of each program. They worked at this job for a year. At the end of the year the outstanding item in their report was, "You are conducting a series of independent graduate programs that have no basic concern with one another. There is no conjoint teaching; there is much duplication of effort. We recommend that a truly integrated teaching program be developed."

They also said that none of the programs had a clearly defined, written goal for the residents. A third problem was that none of the programs had written procedures by which the residents' progress was evaluated; individuals simply progressed through the program, regardless of performance.

Finally, the committee pointed out that there was no common standard for entrance into the graduate programs. Despite whatever progress we had made, there were differences in the capabilities of the residents we accepted.

The committee rated three of our programs as excellent, five as good, seven as acceptable, and three as poor. Then the dean had to call in each program director whose program was rated as "poor" to say, "Here is the rating you got; what are you going to do about it?"

Now as all this was going on, an unanticipated problem arose. As soon as you begin to centralize

programs to make them more efficient, you suddenly give a certain amount of power to the people being trained. Now they've got somebody they can complain about things to. There is never any question in a college student's mind about where to go to complain; he goes either to the dean of the school, or to the president of the university. But when a program is fragmented the student can go to the chairman, and that's all. Now they could come to a central group.

The residents also recognized that the source of their income was the hospital. I don't need to remind you that the one who controls the purse strings has the clout. So the residents knew that if they were going to get something more, they'd have to negotiate with hospital representatives.

Although we tried to establish a house staff counselor, the residents finally formed their own council—The Centerwide Organization. This past year they came in with an impossible group of demands that would have increased the cost of house staff training by some three to four million dollars each year. This was discussed at great length. There was a small cadre of people behind these demands. As you might suspect, the residents ultimately decided that they wanted to declare themselves a union, and therefore petitioned the NLRV to be looked upon as a bargaining agent. And that is where that matter now sits.

Nevertheless, we've moved ahead. The program directors discussed the report of the ad hoc committee and agreed that every program should develop its goals. So now we have on file a written statement of the goals of the training program of every graduate program in our institution. The directors agreed that they ought to define the methods used to evaluate the performance of their trainees, and each program has now done so. They also agreed to file with the Office of the Dean a grade for each resident's performance.

Then they agreed—and this was one of the important points to the residents—to establish an appeal procedure for them. You've all heard stories of how a surgeon, frustrated or annoyed with a resident at the operating table, has said, "Get out, get out." And that ends it for the resident. It had not happened in our institution that I knew of, but the residents were concerned about it. So an appeal mechanism had to be established in case it should happen.

A common standard for admissions to a graduate program has now been developed. No program

can now accept people who cannot converse in English. You simply cannot carry out graduate medical education here with residents who cannot converse in English. I doubt that there are many medical educators in this country who can converse fluently in another language. There are exceptions, I realize; but as a whole, that's true. And particularly when dealing with patients, you must speak their language.

One final thing: the chairmen of the various departments agreed to sit as a committee when deciding upon new programs. No longer could an individual or a single group of individuals petition the dean or the hospital director to establish a new program. The proposal had to be studied by the heads of all of the programs, who discussed it at great length and made the final decision as to whether the new program should be established. By this mechanism, we recently established a new program in emergency medicine. I think that the performance of the group was exemplary. They built a troubled, inadequate program into a good, multidisciplinary approach to emergency medicine that has been well accepted. I wish we had had a similar mechanism to solve the problems of otolaryngology, plastic surgery, and oral surgery. I look forward to the day when perhaps the group will tackle those problems.

In short, a new, multidisciplinary approach to teaching and to solving problems has been developed, that I think will yield very significant benefits.

We are now discussing the idea that all house staff programs be removed from the hospitals and placed under the university; that if we are really engaging in postgraduate medical education, students should be registered in an educational institution, not in a hospital. In one proposal we are considering, residents would be enrolled as students of the university in a course under the program director or chairman, with an established curriculum. That curriculum would include rotation through a variety of laboratories, and in medicine this would mean through the hospitals. A resident learns, for the most part, by taking care of patients; and in taking care of patients, he provides a useful service.

The hospitals are willing to accept this plan. They will provide a grant to the university for the services that are rendered in the course of teaching. It will then be up to the chairman or program director to decide how these funds will be dispensed. This is no different from getting a

training grant from the National Institutes of Health.

Whether this will solve the problem, I don't know. But we have to face the fact that we are engaged in graduate education. If an institution is indeed in education, it has no business being involved in 18 programs that duplicate each other; the programs have to be truly integrated.

"Legitimacy, Strength, and Coming of Age of Family Practice"

Arthur D. Nelson, M.D.
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You heard yesterday, as you heard last year, about the decline in the number of general medical officers in the Navy. That really should surprise no one. We have been moving inexorably towards specialization for more than 30 years. (As we talk about specialization, however, let me remind you of what John Galbraith said: "Specialization is a scientific convenience, not a virtue.")

One factor in the rise of specialization was the experience the GMO himself had in the service. This goes way back to World War II. How does a GMO make out in any of the services? Not very well. He was the battalion surgeon in the Army, isolated in a training post in the middle of Texas. Or he was in combat—way up front.

How did he fare in terms of the practice of his profession? Well, he held a lot of sick calls. He seldom got into a hospital. He almost never had a date with a nurse. And he resented all of these things, especially the last one.

Statistics show that as soon as he had a chance, he got out of the service. He went back to school, took a residency program, and now he is specialized and happy about it.

Medical schools, of course, contributed to the decline of the generalist. They've been doing that for over 30 years. It's almost impossible to get on the faculties of the schools of medicine without being specialized or subspecialized. The teachers in medical schools are the models for their students. The students grow up thinking in terms of specialty care.

Things really began to get tight in medical education after World War II. As you recall, there was need for expansion, but not much money.

About this time the American Medical Association reared its ugly head and said, "No way will we sit still for direct support in medical education." So Congress worked out indirect approaches, specifically the support of research investigations and graduate training. Naturally, the result of this effort was to change the focus, approach, and attitudes of faculties of medicine. "Grantsmanship" became a very significant part of their lives. Education of students to practice medicine began to shift farther and farther down on their list of priorities.

Now the research was good, but the schools tended to lose sight of some of their goals. They were doing everything right, but they really weren't doing the right thing.

I get some of my best material from reading your literature. Admiral Custis said last year at SAC 6, "The medical schools in this country are acutely aware that attitudes engendered in their schools have contributed to the present national crisis in primary care." Well, things haven't changed much since last year, so I'm sure that's still true.

But the general practitioner himself is not without blame. He brought many of his woes upon himself. For example, he failed to get graduate training equivalent to that enjoyed by his colleagues in their specialties. He was discriminated against—as were internists and pediatricians, incidentally—by his friends in the surgical specialties, who set up the relative value scales that paid more for surgery, orthopedics, and the like. He found that he couldn't get hospital privileges in many places where he applied. The generalist found that he was the guy on call 24 hours a day, seven days a week, while the specialists worked 8-, 10-, or 12-hour days, but then signed out with the aid of an answering service. The generalist found out that he had, in fact, second-class citizenship.

Having the numbers that we now have has also contributed to fragmentation of care. Duplication of effort does exist, as do the rising costs which are crippling all of us, and the depersonalization of medicine, almost as a direct result. Patients today are dissatisfied, distrustful, even angry. In many instances, they don't like us; and sometimes they strike back at us through their malpractice suits. Medicine is in trouble today.

A citizen's commission was appointed by the AMA in the mid 1960's called the Millis Commission. They made some serious recommendations,

including the creation of a new kind of physician: the primary care physician. This recommendation was based on the principle that you don't have to be a trained mountain climber to go up two flights of stairs. You don't have to have seven years of plastic surgery training to repair a simple laceration.

In 1969, family practice was designated as the 20th specialty in American medicine. In that year we created the essentials of approved methods in group family practice that are today listed in *Green Guide*. We also created a residency review committee to establish standards and to maintain quality in all approved programs. The Residency Review Committee is often perceived by program directors as the enemy. But really, I've been on that Committee, and we're nice guys. If we seem rough, tough, and disagreeable, it's because we know that the surest way to kill off the specialty is to permit second-class programs to continue.

Since the whole function is to improve quality, things may get worse rather than better. The Residency Review Committee is no longer autonomous. It now reports to the Liaison Committee on Graduate Medical Education.

The third major move in 1969 was establishment of the American Board of Family Practice. Until earlier this year, I was president of that organization. I have since retired. That Board established criteria of excellence for the certification of family physicians. And that Board was first of all the boards in American medicine to recognize the great truth that medical knowledge is transitory in nature, ephemeral, changing. New knowledge is being created; old knowledge is outdated. It was the first to establish recertification as a requirement for certification in its specialty. Every six years the specialist in family practice has to establish the fact that he has kept up in his field.

We must have been doing something right, because since the American Board of Family Practice decided to insist on recertification, 20 out of the 21 other major boards have agreed to do exactly the same thing. The only hold-out is neurosurgery.

Well, I hope I have established that family practice is legitimate. That's our parentage. We were born out of necessity. We followed a marriage between the profession and the public, and I hope you will believe that we're legitimate. At least we have the papers to prove it.

Now, it would be foolish for me to stand up here and claim that family practice is truly wonderful.

We have our strengths, but we also have our weaknesses. I'd like to discuss both with you in the hope that if we can identify weaknesses—and I'm not speaking about you, but about family practice across the country—perhaps we can find ways to improve them.

One of our most serious problems is that we just don't have teachers for family practice. Medical education dismantled the machinery to produce generalists. They had no training programs, no fellowships, no training grants to turn out instructors who would become assistant professors and professors of family practice.

Another problem: We in family practice are still relatively weak in the medical school department. Some schools have established departments; others have divisions. Family practice hasn't yet been universally accepted. The worst tendency on the part of the medical schools is to relegate family practice to out-of-sight, out-of-mind affiliated community hospitals. They argue that their own institutions provide tertiary care, and that family practice, therefore, doesn't belong.

I heard you argue yesterday, and appropriately so, that internal medicine is as primary a type of care as you get. So are other specialties, such as Ob/Gyn. If they belong in tertiary care institutions, then so does family practice.

Dr. Robert J. Haggerty, who is professor of pediatrics at Rochester, said, "There should not be separate tracks for the education of the traditional specialists and primary care personnel. Family practice residencies should be established only in those hospitals without other postgraduate training programs." And last year at your SAC 6 meeting you said, "Family practice residencies should be established only in hospitals without other postgraduate medical training programs, in order to maintain the integrity of family practice programs and to support their specialty identification." Well, that sounds like separate tracks to me. I worry about it, and I hope you'll worry about it. I have no specific recommendation other than to worry.

Let me read something that will not be published until October 1975. Dr. Arnold S. Relman is professor of medicine at the University of Pennsylvania. He is one of the strongest professors I know. In an article that will appear in the *American Journal of Cardiology*, he says, "Most unbiased observers will agree that there are too many specialists, and an inadequate number of physicians delivering primary care. It is

estimated that an efficient health care system in this country will require at least 60% of its active practitioners to provide primary care. Some observers think that the figure should be as high as 70% or 80%.

"If you wish to change the present mix of practitioners so that 50% are providing primary care within 10 years, about 90% of all graduates from U.S. medical schools would have to enter primary care activities. Any well-trained general internist or family practitioner ought to be able to provide good ambulatory care for patients with the common diseases, such as those affecting the cardiovascular system, consulting the cardiologist."

He makes this observation as well: "If subspecialists are to provide routine care, then it will be necessary to increase their number. If this happens, chaos will abound, and this country will experience an intolerable escalation of costs for health care services."

As we consider where we should go, I suggest we be mindful of the old adage applied at General Motors: "When you find something that works, do more of it. If you find something that doesn't work, do less." We're finding that family practice works.

We have to be careful about the training we give our residents. It is possible that our family practice programs could evolve into nothing more than three-year programmed internships. That would be dreadful. It is absolutely necessary that we build progressively more difficult assignments for them. We have to give them challenges. This can be done through more sophisticated teaching, through having higher expectations for them, and through the use of residents as consultants to junior officers and as teachers of junior residents.

Keep your standards high. Your training programs must stress education in professional development. If you don't want to produce second-rate medical officers, you can't have second-rate programs.

In family practice, our strength derives from the fact that we are responsive to the needs of society. People want us. And I believe that the Navy wants us; I know it needs us.

There are today 7,073 diplomates of the American Board of Family Practice. Another 240 applicants will take the exam next month. Every single one of our diplomates has passed the certifying examination. Not a single "grandfather" has been ushered in.

Last year, Admiral Custis said, "We are the prototype corporate health care delivery system. We are the trailblazers. We have the answer, and we'll soon fill the void in primary care. We have the management to correct supers specialization and service fragmentation."

I can only say, "Amen," and you'll need family practice to help you do those things. As goals for your family practice programs, I suggest you adopt the mission of the United States Military Academy. It is:

- To instill discipline and a high sense of honor.
- To develop the power of analysis so that the mind may reason to a logical conclusion.
- To instruct and train the corps of cadets so that each graduate shall have the qualities and attributes essential to his progressive and continued development throughout a lifetime career as an officer in the regular Army.

Now, just change "cadets" to "residents," and "Army" to "Navy."

Family practice is not a terminal occupation. It is the beginning: a new era in medicine.

Internal medicine has to get into the picture of primary care. Pediatrics is in there already; family practice is in there. But there is a lot of room, so everybody is welcome.

Just a few conclusions and recommendations: The Navy needs well-trained family physicians. To improve the capacity and performance of the GMOs you now have, make additional training available to them. I would encourage all uncertified GMOs to study and sit for the American Board of Family Practice. There's still time to do that between now and 1978.

I know that you are going to continue to stress ambulatory care as the only way to save on the high cost of hospital care. To save, you must keep patients out of the hospitals, and ambulatory care is the answer. But I do hope you'll do it right. I see no harm in continuity of care. I see nothing wrong with comprehensive care. Surely there's no harm in establishing rapport with patients. How else can you identify those who have problems such as alcoholism? Family doctors do take care of those problems.

I trust that you will constantly reassess what you're doing, and possibly find new ways of delivering service. I heard—this may be just a rumor—that it was John Paul Jones who invented sick call. Now he also sailed around in wooden ships with sails. We've gotten rid of the sails, but we still have sick call. Are you sure that's the

right way to practice medicine? Are you sure that's the best approach?

In an organization as large and sophisticated as yours, you have remarkable opportunities to evaluate what you do and to improve upon it—to compare several approaches, to seek the better way. You already have the system within which you can do this work.

The Navy is famous for teamwork. I trust you will work together. I trust you will help yourselves develop truly outstanding programs for family practice within the Navy system.

This is the time for the fundamental specialists in medicine to pull together. We're all in short supply. We need each other. Together we can multiply our contributions to the care of patients, in their family, in their community, and in their Navy environment. Together we can set an example that the rest of the country can follow.

PANEL DISCUSSION:

CAPT D.M. Gragg, MC, USN

Jay P. Sanford, M.D.

James E. Eckenhoff, M.D.

Arthur D. Nelson, M.D.

CAPT W.M. McDermott, Jr., MC, USN (Moderator)

Q. Dr. Sanford, last year Dr. Curreri emphasized the role family practice would play in the curriculum of the USUHS. Today you didn't say anything about it. Has this changed?

Dr. Sanford: No. I thought I pointed out that we would be involved with family practice.

I think there are certain very practical aspects that one has to look at when you begin to envision a family practice program. Let me point out, for example, that we will ultimately have 175 students in a class. If 50% of their time is spent in family practice, that means that at any one moment you have approximately 88 students in family practice. Then look at the capabilities of the family practice training programs that currently exist in the Navy, Air Force, and Army. I think there are 13 programs, and I know one of these is really not a family practice program, so that there are really 12.

Malcolm Grow USAF Medical Center has a very fine program. But if we put 12 students in that program, we would destroy it. The staff would be unable to handle these students. A student would see the patient before the resident, so the time the resident spends with patients would become progressively less.

So we've actually looked at the number of physicians who are available, and looked at the number of students, and have decided that three months is compatible with the existing programs.

I just returned yesterday from a meeting of the Board of Internal Medicine where we discussed the examination in July. Some 6,800 physicians took that examination in July, a number comparable to the total number of family practi-

tioners in this country today. There will be, actually, 4,800 new certified internists within the next several weeks.

So we're talking about a numbers problem. And the numbers problem in family practice is such that I think we at the USUHS have to make certain that we don't kill the program with love. If we aren't careful, we can put so many students into family practice that I think we could smother it. And I personally don't wish to do that.

Dr. Nelson: I don't think we should get hung up on the term "family practice." That describes the broadest specialty discipline in American medicine today. It describes a discipline that will be applicable to many of the things you do.

The people at sea have a family relationship. It's a crew; they all pull together; they are going to have a variety of problems. The family doctor is going to be qualified to handle these.

Personnel ashore have dependents, and the family doctor can handle these patients. Retirees also want the sort of care that can be given by the family physician. I think that the service applicability for family practice is so great that every effort must be made to expand, to develop, to create as big a program as we can.

On the other hand, you can overdo it; you could kill it with kindness, with love, and we must avoid that.

Q. Dr. Sanford, Dr. Eckenhoff recommended that all training programs should be under the auspices of the university. This is one of the prerogatives that we in the Navy retain for our physicians. How do you envision the role of our training programs as part of the USUHS?

Dr. Sanford: Let me make very clear the relationship of the USUHS to the three major teaching hospitals in the Washington area. It is not going to be a certain group of individuals in the university and a certain group of individuals in the hospital. The faculty of the university will be the people in the hospital and the clinical departments. The individuals who are responsible for teaching will be the same individuals who are responsible for patient care. Certainly at the clinical level, the faculty will also have clinical responsibilities.

Now in certain areas we may well draw upon individuals from other fields, or from other facilities in the Washington area because of their great expertise.

The graduate training program is an integral part of the undergraduate training program. You and I know that medical students learn more from members of the house staff than they learn from the professor or the assistant professor who makes teaching rounds for two hours each day, and then sees patients with the student in the clinic.

We have a vested interest in making certain that our programs are of top quality. This is one of the reasons it has been so important for me to participate in this SAC 7 meeting: it's critical to the ultimate development of the teaching programs.

VADM Custis, as a member of the Board of Regents and as the Surgeon General, has an agreement that we will have input into the teaching hospitals. And within the hospitals—just as at Northwestern—the department chairman has overall responsibility.

This means that we have to work very closely together. Certainly, at the moment, I would be the last to propose

that we're going to have a purple suit. We're a long way from that, at least as far as I'm concerned. But somewhere down the line, we may have to discuss the whole problem of rotation of residents. How are we going to relate to the other facilities? It's clear that our Air Force students are going to be in Wilford Hall, since that's the major Air Force hospital. We've got to decide how we can best relate to those of you who are in Oakland, or San Diego, or Jacksonville, or Portsmouth.

At the moment I can't tell you, except that we're dealing with a single unified group of individuals and that we have to work together. If we do, it will be to our advantage. And if we don't, we're going to be in trouble.

Q. We've spent most of the morning talking about graduate and undergraduate medical education. Dr. Cox is in charge of a lot of other educational programs in the Navy, all of which we are involved in, too. What is the role of the university, for example, in relation to our paramedical and other health professionals?

Dr. Sanford: As you all know, the USUHS is the Uniformed Services University of the Health Sciences, but it was established to function in these other areas. As a result of a Department of Defense decision, we have been constrained from training in any area except a medical school and those activities intrinsically related to a medical school. We interpret this as being a limited graduate program. There is a study under way to decide whether the university is the appropriate mechanism for some of these other programs, or whether there are alternatives.

One of the questions which has been asked is, "How are physician extenders going to be utilized?" We should know the answer before we make a major commitment to their training. This is under consideration at the present time. In fact, this is a major consideration in the Roger Bill, in terms of the whole problem of the National Health Service Corps. I didn't mention it previously, because we were specifically constrained from mentioning it.

Q. I'd like to ask both Dr. Sanford and Dr. Eckenhoff if they see in this gothic framework any solution to the problems that have confronted us in the past. It concerns the credentials of the excellent teachers we have in the military who may lack bibliographies, and the research background that are held so dear in the academic community. What criteria will be used for service members in the USUHS?

Dr. Sanford: The only criterion that we propose at the present time, and that it is in writing, is excellence in one's field. Now excellence can be defined in many ways. In certain specialty societies within the last several years, excellence in practice has been recognized and individuals have been elected to membership. I also believe that someone who is excellent as a teacher should be recognized.

It's a little difficult to set up the criteria for "excellence." It's not our proposal that everybody has to have a long bibliography, or even has to have a bibliography at all. We know, on the other hand, that this is one of the manifestations of scholarly activity—but it's only one. Certainly, that's not going to be the only criterion we use.

Dr. Eckenhoff: I find no fault with what has been suggested. It seems to me that the medical school faculty has a number of obligations, including research and care of

patients. As long as we're engaged in developing physicians, we have to have physicians who know how to teach with patients.

I think that there has to be recognition of a good teacher. Towards this end, we've established two tracks: the standard academic track; and a track that is the equivalent of a professor of clinical medicine, which implies that the individual is not expected to have the time to write a lot of papers for publication. If you're going to spend your day taking care of patients and teaching, you simply do not have time to do research and write papers.

There are other measures of scholarly activity besides papers. Papers are simple because the information is in black on white, right there for everybody to see, and you can measure the person. It's a little more subjective to use teaching and the clinical care of patients as a measurement, but nevertheless, a system has to be developed to measure that competence.

I'd like to go one step further. In our institution—and I think this is true of all of the universities—there are three faculty matters that should not, and generally are not, in the hands of a dean or his office. One is the determination of who is to be admitted to a program. No administrator, no university, no official should say, "You've got to admit this person." That is a faculty matter. Second, the curriculum is a faculty matter. And third, determination of the faculty is up to a faculty appointments and promotions committee. So a dean's office or a university should not be able to direct who is to be appointed or who is to be promoted. This must come from a faculty decision.

I would like to clarify one point that was raised a bit earlier. When I mentioned university control of graduate medical education, I meant that if graduate programs are conducted inside of a university, the university should have a hand in overseeing those educational programs. It makes no sense to me to have a group of university-affiliated hospitals with educational programs in which the university has no say. This does not mean that non-university-affiliated hospitals would not have their own programs. It does mean that somebody in the institution should be charged with overseeing programs, looking at one program versus another, coordinating programs; someone should be in charge of education.

And under no circumstances should anyone believe that I said, "This does away with specialty boards." That is not true. But I believe that the average specialty board cannot police the programs within individual institutions. That has to be up to the institutions.

Q. The first optimistic rumors indicated an increased emphasis on primary care, and on general and family practice in particular. This, I think, has been ignored in our medical training. Would the panel please comment?

Dr. Nelson: This year, for our July entering class, there were more than 1,600 vacancies. There were 2,200 applications from American graduates for those slots. This seems to be on the rise.

CAPT McDermott: Of the roughly 400 people applying for G-1 positions this year, the first choice of 78 was family practice.

Dr. Eckenhoff: Every institution should not be expected to mount programs in primary care or in family practice.

There are not enough teachers at the moment to take care of family practice, nor are the resources of every medical school adequate to mount programs in these fields.

I know of one institution where 90% of the graduates of one class went into family medicine. But it was set up in a small community, and was a new institution. It utilized family practitioners from the city, and it worked fine. In our institution, it doesn't work well.

Next Tuesday morning, I will greet the incoming class of 170 students and say, "Now, how many of you intend to go into family practice?" About 100 out of 170 students will put up their hands. But when that class graduates, if it's typical, do you know how many will go into a family practice program? About eight or ten.

But that possibly is our fault, because this is the way we're set up. And in recognition of this, we're developing not a family medicine program, because again our resources don't lend themselves to it, but general medicine program. We think we can produce a very good general medicine program, but we'd probably end up with a very mediocre family practice program at the moment.

Q. Is the USUHS a degree-granting institution?

Dr. Sanford: The law that establishes us authorizes the granting of advanced degrees. To actually be able to do this, you must be accredited, so you must deal with accrediting bodies. We anticipate offering advanced degrees. This is something we can envision in the future, but it's still visionary.

Q. Many of us who are outside the Washington, D.C. area have developed relationships with universities in our geographic areas. What is the impact of the USUHS on those relationships? More specifically, will those two situations conflict?

Dr. Sanford: I don't believe there is any reason for them to conflict. I've been asked the same question, actually, on a number of occasions. I happen to have spent the last 18 years as a faculty member of the University of Texas, but I also have a faculty appointment at Baylor University Medical Center in Houston. It has been mutually beneficial. I don't believe it has compromised my position in any way. We're willing to do everything in our power to preclude fracturing any of the relationships you have already established.

Q. Is it conceivable, within a multispecialty graduate training hospital, that a single family practitioner, with the assistance of other medical specialists, could mount a program in family practice?

Dr. Nelson: Even with a dearth of available teachers, a family practice program can be mounted successfully. I believe you are doing this in the four hospitals in the Navy where family practice programs are supported by a variety of forces. In your institutions, those programs belong to the entire hospital staff. All of the staff can participate. It requires only that there be a full cadre of knowledgeable family physicians who can be the organizers, the role models, who can lay out the curriculum, see to it that the people learn what they need to know to practice family medicine. But there's room for everybody to participate. The strongest programs I've seen are in settings where everybody feels that the program belongs to them.

Reserves

Reserve Medical Unit Training Officer Course

LT B.L. Jones, MSC, USN

The operation, administration and training of the Naval Reserve shall be integrated within the Regular Naval Establishment so completely that all bureaus and offices of the Navy Department, all commands and units of the operating forces, and all shore activities of the Naval Establishment shall perform their assigned tasks and functions in connection with the Naval Reserve in the same manner as is provided for the Regular Navy. . . . SECNAV Instruction 1001.4 Series

On 1 August 1974 the medical subprogram of the restructured Reserve was established. Eighty balanced units, containing some 2,840 billets, were set up within this subprogram. The units were tasked to augment naval regional medical centers in the event of mobilization, and were to be trained to fulfill clearly defined mobilization objectives. Program sponsors were directed to provide a mission and training statement for publication by the Chief of Naval Reserve.

Although long standard in the other services and in some programs of the Naval Reserve, the unit concept was totally new to the Navy Medical Department. Most of Fiscal Year 1975 was devoted to developing an administrative organization and to exploring training objectives, methods, and materials. No body of doctrine or curricular material was readily available for Reserve training, and there was no organization within the Health Sciences Education and Training Command (HSETC) that had ever been specifically tasked to provide a training program for inactive Reserves.

Early attempts at developing training objectives and courses of instruction were based on the assumption that expectations of Reserves must

differ from those of the active Navy, and that any program of training would have to be tailored to these different expectations. But closer evaluation of the quality of Reserve assets, and consideration of the mobilization responsibilities of the Naval Reserve led to the conclusion—from which all subsequent Reserve training plans have proceeded—that training objectives, performance requirements, and curricular material should be the same for the Reserve as for the active Navy.

Gradually the concept of augmentation and replacement of active personnel in naval regional medical centers was further developed. Reserve units were seen as regional assets rather than as augmentees of the medical center only. It became possible to assign to each unit an active-duty counterpart for mobilization and training, in accordance with the mission and training statement later published as CNAVRESINST 1510.7. This statement provided for unit, sub-unit, team, and individual drills, according to requirements; but it also stressed the importance of unit active-duty for training at the active-duty counterpart command twice during the three-year training cycle. The decisions identifying individual units with specific naval regional medical centers were based primarily on the known mobilization requirements of those commands as reflected in the Mobilization Allocation/Requirements Plan (M-MARP) and SECNAVINST 6440.1A. Other considerations were the geographical proximity of Reserve unit to active command, and the capability of active commands to provide Reserve training opportunities.

Some problems appeared when matching specialty requirements (both officer and enlisted) with Reserve assets. Specialty shortfalls in field medicine, preventive medicine, and orthopedic cast-room technicians were immediately identified on the enlisted side. In light of Department of Defense guidance indicating that dependent care would be curtailed on mobilization, it was also clear that members of clinical specialties directed primarily toward the care of dependents—namely Ob/Gyn and pediatrics—would either have to be declared excess or offered a program of military medical training that would develop needed skills. Except in these clearly defined skill shortages and mismatches, it has been decided to:

- Proceed with the first three-year training cycle;
- Develop and improve existing skills;
- Refine the organizational structure of the restructured Reserve to achieve current mobiliza-

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tion readiness objectives;

- Await final publication of the BUMED Logistic Support Mobilization Plan. Specific necessary or acceptable specialties can then be defined.

To achieve these goals, a training officer course was established. There were three objectives: (1) to ensure objectives are implemented realistically; (2) to provide specific guidance to improve readiness; and (3) to establish standard procedures and reporting requirements. This course proved difficult to develop because a great deal of original research was necessary to determine the direction it should take. Reserve Division, Bureau of Medicine and Surgery was assisted in this task by HMCS W.J. Morrison, a Reservist on temporary active duty under the summer augmentation program

The course was constructed to allow training officers to meet each other and share ideas. The number of participants was limited to ensure a maximum amount of discussion and to help achieve consensus of opinion among the members. The initial training officer course—probably a first for the Restructured Reserve Program—was held at Naval Regional Medical Center, Great Lakes, Illinois, 15-26 September 1975.

The course included lectures, field trips, skits, panel discussions, and an introduction to personnel management techniques. All participants were well indoctrinated in the role of the training officer, and were aware of interim training requirements for the Reserve medical program until it is more firmly established.

The course stressed the uniqueness of each unit, and even though the participants were encouraged to work together, ultimately each training officer retained the responsibility of developing the criteria for his own program. They were encouraged to develop their programs to the ideal augmentation situation—to train their unit to fill the exact mobilization requirements of its active-duty counterpart.

The success of this initial program was directly related to the support received from CAPT A. Wilson, commanding officer of Naval Regional Medical Center, Great Lakes, and his staff. LT J.L. Russell, MSC, USN, LT A. Baker, MSC, USNR, and LTJG A.R. Simas, MSC, USN did an outstanding job as faculty members.

[Editorial note: Since this article was written, similar courses have been offered at Naval Regional Medical Center, San Diego, California, and Naval Regional Medical Center, Charleston, South Carolina.]

All About Obligations

All medical and osteopathic students participating in any of the Navy's subsidy programs incur an active duty obligation for the financial support they receive. The length of the obligation period is naturally a matter of major interest to these students: it will determine to a great extent the direction of their professional careers.

In each case, determination of the length of active duty obligation must reflect the Department of Defense and Navy Department policy in effect at the time a student enters one of the subsidy programs. These policies have undergone continual revision, and reflect our continuing effort to accommodate the Navy's needs while at the same time supporting individual incentives.

To provide information pertinent to each of you, we have summarized below existing directives, as well as a directive currently being developed by the Department of Defense.

Medical Osteopathic Student Program (1965). Students who entered this program prior to 1 January 1975 and who served for four academic years incurred an obligation of *five years*. Students who entered the program prior to 1 January 1975 and who served for *three* academic years or less incurred an obligation of *four years*. Students who enter the program after 2 January 1975, and who serve for either three or four academic years, incur an obligation of *seven years*.

All obligations are in addition to any military obligation remaining, at the time of entrance into the program, because of previous participation in an officer-producing program. All obligations must be served *after* completion of the first year of graduate medical education. Officers in the Medical Osteopathic Student Program who were enrolled prior to 1 January 1975 and who have incurred a five-year obligation may discharge up to three years of their obligation during graduate medical education beyond the first-year level. Students with the same entry date who incurred a four-year obligation may discharge up to two years of their obligation during graduate medical education beyond the first year. However, students in both groups will incur an additional obligation of two years for participation in graduate medical education beyond the first-year level.

Scholars' Scuttlebutt

Officers with seven-year obligations (those entering the program after 2 January 1975) may not discharge any obligation while participating in graduate medical education. However, they incur no new obligation during their training years, providing they have at least two years of obligation remaining.

Senior Medical Student Program (1915). The obligation for participation in this program is three years after completion of the first year of graduate medical education. A maximum of two years of this obligation may be discharged during graduate medical education beyond the first-year level. An additional obligation of two years is incurred for participation in graduate medical education beyond graduate-level-one training.

Armed Forces Health Professions Scholarship Program (1975). Students who entered this program prior to 4 February 1975 incurred an obligation of one year for each year of participation. For this group, a year is defined as any period of twelve months or less. The minimum obligation is two years. The obligation cannot be discharged during periods of graduate medical education. Students in this group do not incur an additional obligation for participation in graduate medical education. However, they must agree to serve on active duty for a minimum of two years or for the remainder of their subsidy obligation, whichever is longer.

Officers who entered the program *after* 4 February 1975 incur an obligation of one year for each year of participation, with a minimum of two years. Periods of less than six months beyond the first two years will be counted on a day for day basis. Periods of more than six months will be considered as a full year. Officers in this category will not incur an additional obligation during graduate medical education, and may not discharge any part of their obligation during training. These officers must serve only their remaining scholarship obligation following completion of graduate medical education.

Proposed Department of Defense directive. At the present time the Department of Defense, in cooperation with the medical departments of the three Armed Forces, is revising its regulations concerning active-duty obligations for subsidy students. It is anticipated that this revision will

impose an obligation on all graduate medical education participants that is *in addition* to the obligation incurred as a result of participation in a subsidy program. As a result of this additional obligation, new participants will be required to serve on active duty for longer periods of time than students who are presently in Navy programs. Officers who participate in Navy graduate medical education following completion of subsidized education programs can expect total periods of service of approximately eight to ten years. When released, this new directive will be fully reviewed in "Scholars' Scuttlebutt."

Determination of active-duty obligation is obviously complex and possibly confusing. Each determination must be made on an individual basis. We emphasize the importance of each prospective candidate, as well as all participants, ascertaining exactly what obligation is incurred for any phase of training. Do not make personal plans based on statements of obligated service unless these statements are obtained in writing from the Bureau of Medicine and Surgery or higher authority. Requests for determination of active duty obligation may be forwarded to: Department of the Navy, Bureau of Medicine and Surgery (Code 312), 2300 E Street, N.W., Washington, D.C. 20372.

PORTHOLES

Sometimes, novice seamen will ask "how comes holes on the starboard side are called portholes instead of starboardholes?" Many old salts are ready with explanations, but actually the name "porthole" has nothing to do with its location. The word originated during the reign of Henry VI of England (1485). It seems the good king insisted on mounting guns too large for his ships and therefore the conventional methods of securing the weapons on the forecastle and aftcastle could not be used.

A French shipbuilder named James Baker was commissioned to solve the problem. And solve it he did by piercing the ship's sides so the cannon could be mounted inside the fore and after castles. Covers, gun ports, were fitted for heavy weather and when the cannon were not in use.

The French word "porte" meaning door, was used to designate the revolutionary invention. "Porte" was Anglicized to "Port" and later corrupted to porthole. Eventually, it came to mean any opening in a ship's side whether for cannon or not.



Drs. Cat and Davidson: Resettling

The arduous task of resettling Vietnamese refugees has been smoothed by a strong assist from Navy personnel such as LCDR **Dennis M. Davidson** (MC). A staff physician at NRMC Camp Pendleton, Dr. Davidson commuted daily from his Vista home to the Camp Talega Naval Dispensary to provide medical care for refugees and shore up administrative efforts. Working with him was Dr. Nguyen Dang Cat, a plastic surgeon trained in the U.S. Before leaving Vietnam, Dr. Cat had been chief of the Plastic Surgery Service at one of the country's largest military hospitals.

The Navy tradition reached to a new generation in two Medical Department families recently when **Mark Kane**, son of CDR **George P. Kane** (MSC) and **David Brandon**, son of CAPT **Daniel A. Brandon** (MSC) were sworn into the Navy by their fathers. The new recruits, who came on board last October, are headed for service in the Hospital Corps. Apparently recruiting—like charity—begins at home.

Imagine this: you're in your office on a regular workday when you get a phone call: "Better brush up on your Japanese. The Secretary of the Navy wants you along on a trip." You're whisked away on a ten-day, 30,000-mile odyssey through WESTPAC with the top man himself. Afterwards, he promotes you on the spot. A movie

script? No, just the latest adventure in the Navy career of CDR **Adolph "Dick" Dasler** (MSC).

CDR Dasler, head of the NNMC Heat Stress Division, was tapped by SECNAV for the WESTPAC trip last December. The mission: to check on the line's progress in combating heat, noise, and other environmental stresses aboard ship. Stops included Alaska, Japan, Okinawa, the Philippines, and Hawaii. In Honolulu, CDR Dasler learned he'd been promoted, and SECNAV pinned on his new rank.

The newly commissioned U.S. Naval Regional Dental Center, Roosevelt Roads, Puerto Rico, has its first hero. Last August, upon arriving home from work at the prosthetic laboratory, DT2 **Steven D. Hultquist** heard his wife calling for him from the back yard. She had just discovered Shawn Gahagan, dependent son of a Navy petty officer, submerged unconscious in a wading pool. DT2 Hultquist immediately ad-



DT2 Hultquist: Smiles



Headed for the Hospital Corps: New recruits Kane . . .

NAVMED Newsmakers

ministered mouth-to-mouth resuscitation, reviving the child while his wife called for an ambulance. There was a letter of commendation in store for the resourceful dental technician, but his biggest reward was Shawn's smile.

It's not unusual for two married nurses to report for duty at a hospital on the same day—but the two who reported to NRMC Camp Pendleton on



LT Robinson: Navy first

2 September 1975 are married to each other. It's the second active-duty tour for the **Harmeyers** (LTJGs **Gary** and **Karen**), who previously served at NRMC Long Beach. Between assignments, and while members of the Navy Reserve, they earned B.S. degrees in nursing from the University of Iowa. While there, they helped prepare long-range training programs for their Reserve unit, and also found time to help the on-campus efforts of the Des Moines Nursing Recruiters. Their former Reserve unit CO, CAPT **L.S. Van Orden** (MC, USNR-R), says of the Harmeyers, "They are the most effective Nurse Corps officers I have encountered in my 18 years of association with Navy medicine."

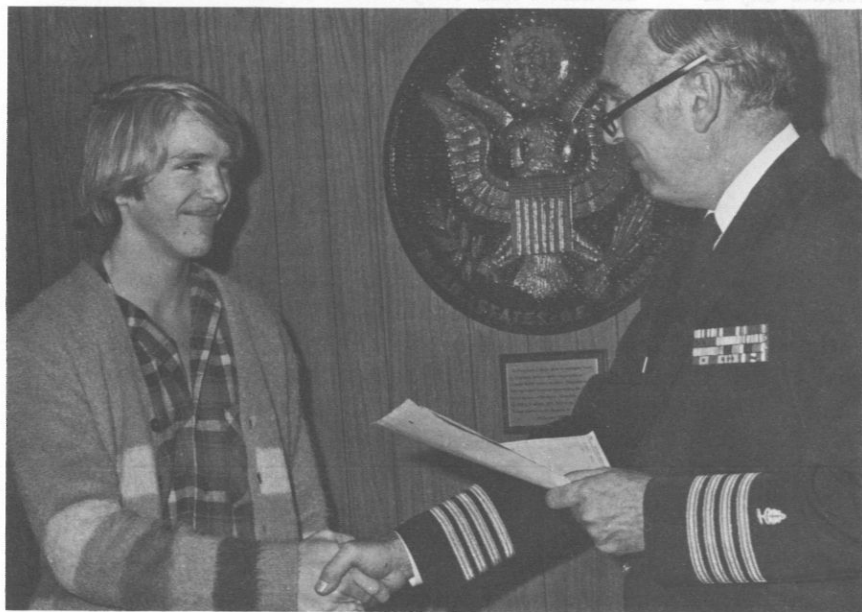
In a handsome collection of professional achievements, LT **John D. Robinson II** (MSC, USNR-R) can point to one for the history books: he's the first black psychologist to serve in the U.S. Navy. Sworn in last April, Dr. Robinson serves his active duty in the Clinical Psychology Department at the National Naval Medical Center. Other hats he currently wears include: associate professor (and former chairman) of the Counseling Psychology Program, American University; special assistant to the Assistant Secre-



Harmeyers: Teammates

tary for Health, Public Health Service; and faculty members of the George Washington and Georgetown University Medical School Psychiatric Departments. A native of Houston, LT Robinson earned his Ed.D. from the University of Massachusetts at Amherst in 1971.

Catching up with the pros who help keep Navy medicine first, ashore and afloat, *U.S. Navy Medicine* salutes: HMC **James R. Coleman** and HM2 **James E. Wilson**, honored for heroism and outstanding performance of duty in rescue operations involving the USS *Belknap* . . . LCDR **E.V. Hannigan** (MC), honored by the American College of Obstetricians and Gynecologists for the best obstetrics paper from a teaching hospital . . . LCDR **R.C. Miller** (MC), winning similar honors for best resident's paper in obstetrics . . . CAPT **Roger Ireland** (MC), elected vice-president (aerospace medicine) of the American College of Preventive Medicine . . . RADM **William Lukash** (MC), named first recipient of the American Academy of Family Practice President's Award for his efforts in furthering the cause of family practice . . . CDR **Sanford A. Glazer** (DC), recipient of a distinguished service award from the American School Health Association . . . LT **Ryan S. Searle** (MC), winner of the Surgeon General's Award at graduation ceremonies honoring Flight Surgeon Class 75-3.



. . . and Brandon

Trichinosis: A Vanishing Disease?

LCDR Herbert B. Tanowitz, MC, USNR

During the past two decades, because of the declining incidence and severity of trichinosis in the United States, a new generation of medical students and physicians has emerged who are relatively unaware of the protean clinical manifestations of this disease, and techniques available to diagnose it. In 1973, only 124 cases of trichinosis were reported to the Center for Disease Control (1); in 1972, 96 cases were reported. Recent autopsy studies (2,3) have demonstrated that only 4% to 5% of human diaphragms harbor *Trichinella spiralis* larvae, while autopsy studies 30 years ago (4,5,6) showed approximately 12% to 20% infection.

Undoubtedly the apparent decrease in the incidence of trichinosis can be attributed to widespread education of the public in the proper way to prepare pork and pork products. As another preventive measure, many communities and states have banned the feeding of raw garbage to hogs.

Yet considerably more individuals are infected with *Trichinella* than are diagnosed clinically. Most cases of trichinosis go unrecognized during their acute stage, probably because the victims are not severely ill and do not demonstrate any of the classical signs, symptoms, or laboratory features usually associated with the disease. When seen by a physician, some of these patients may be diagnosed as "viral syndrome" on clinical grounds alone.

STAGES OF INFESTATION

When raw, rare, or inadequately cooked meat containing encysted larvae of *T. spiralis* is eaten, the larvae are liberated and almost immediately invade the duodenal and jejunal mucosa. Within a few days the larvae mature and mate. They

remain within the intestinal wall, where larvipositing continues throughout the life of the female, an estimated 3 to 16 weeks. Approximately 1,500 larvae are discharged, most of them entering the circulatory system, although a few may reach the bowel lumen.

During this initial acute stage of infestation, gastrointestinal symptoms may occur in the host. Stool examination usually does not reveal either larvae or adult nematodes. Although all tissues and organs are subject to transient invasion by the circulating larvae, encystment only occurs in skeletal (noncardiac) muscle; nematodes that fail to reach skeletal muscle perish. Encystment may occur as early as the seventh to tenth day of the parasite's life, and may last six to ten weeks. During this time, depending upon the number of encysting and circulating larvae, signs and symptoms in the host range from negligible to severe. Muscle pain, for example, can be excruciating or entirely tolerable. Myocarditis due to larval destruction, necrosis, and inflammation of myocardial fibers may become symptomatic in heavy infections.

Invasion and encystment of striated muscle is initially accompanied by an eosinophilic and granular clumping of the sarcoplasm with disappearance of muscle striations. Later the area about the larvae becomes edematous and fragmented. The sarcolemma usually remains intact, its nuclei becoming plump before multiplying. Portions of the muscle fiber far from the larvae undergo basophilic degeneration accompanied by an inflammatory reaction in the myomesium. Five or six weeks after they invade the muscle fiber, the larvae begin to form cysts, completing the process in about three months. Subsequently, the cysts may calcify, but this does not necessarily indicate the larvae's demise.

Since it has become less apparent clinically, trichinosis taxes the diagnostic acumen of the physician; only one or two clues may be evident initially. To diagnose trichinosis the physician must be aware of the many signs, symptoms, and laboratory features of the disease; careful

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histories should be kept, so each case subsequently appears to be an "obvious" example of this disease.

A history of pork ingestion helps sustain the suspicion of trichinosis. Many products, such as hamburger, may contain a significant although unadvertised amount of pork. Bear meat has also occasionally been implicated as a source of trichinosis.

When the meat of an infected hog is diluted with meat from many uninfected hogs, as in the manufacture of packaged products, the dosage of *Trichinella* per pound of meat is proportionally reduced. A mild illness syndrome results.

The most frequently seen classical feature of acute trichinosis is an elevated and rising eosinophil count. Other clinical signs and symptoms that suggest the presence of acute trichinosis are periorbital edema accompanied by myalgias or fever. Although not among the common features of trichinosis, edema of the extremities, skin eruptions, and conjunctival hemorrhages have been noted, along with lethargy, malaise, diaphoresis, chills, and abdominal pain. Only in moderate to severe infections are there nonspecific T-wave electrocardiographic changes and cardiac arrhythmias associated with myocarditis. The sedimentation rate is often decreased in acute trichinosis.

Most researchers consider muscle biopsy to be the most important diagnostic procedure for absolute confirmation of trichinosis. Recent evidence (1), however, indicates that this procedure is not as useful a diagnostic tool as the various serological methods performed serially with high-grade antigen. In 1973, 124 cases of trichinosis were reported to the Center for Disease Control. Eighty-five of these cases were studied by serological means, with positive results in 79 cases (93%); but in 29 muscle biopsies, only 20 were positive (70%). It seems evident that in light *Trichinella* infections with small numbers of encysting larvae, the chance of obtaining a larva in the biopsy material is diminished. Similarly, chances are slight of finding adult nematodes or larvae by stool examination during the first week of heavy infection, and even more unlikely in a light infection.

Although serologic diagnosis of trichinosis cannot be reliably employed before the third week, changing titers are highly suggestive of the disease and can be used to confirm the clinical diagnosis. The latex agglutination test is a reli-

able, simple test that can be performed in a few minutes in any routinely equipped laboratory. It usually becomes positive some seven to ten days before the complement fixation test. The bentonite flocculation and complement fixation tests are not routinely available, and studies must be sent to a central reference laboratory for analysis. These results, usually returned long after the patient has been discharged from the hospital, confirm the latex agglutination test and the clinical impression. The skin test usually becomes positive by the 17th day of the illness.

TREATMENT

The treatment of mild acute trichinosis should be predicated upon keeping the patient comfortable. Steroid therapy may actually increase the numbers of circulating larvae and prolong the larvipositing period. Delayed hypersensitivity is apparently the stimulus that results in the intestinal expulsion of the adults (7), and steroids presumably interfere with this reaction. The use of thiabendazole as a specific anthelmintic probably helps eliminate worms during the intestinal phase, but its efficacy against circulating or already encysted larvae remains questionable.

Many countries, including the United States, still have no inspection procedures to assure the consumer of *Trichinella*-free meat. Education continues to be the best means we have to alert the consumer to the need for proper preparation of pork and pork products.

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On Duty

Dental Spaces Aboard the USS Nimitz

CAPT E.H. Plump, DC, USN

The commissioning of the USS *Nimitz* (CVAN-68) on 3 May 1975 marked the first application of "design criteria for shipboard dental spaces." The criteria were worked out concurrently with the development of the *Nimitz* dental spaces, and will be used for all new ship construction where dental spaces are required. Nuclear carriers, USS *Eisenhower* and USS *Vinson*, and the new submarine tenders are a few of the ships affected by the new design.

Unique to the *Nimitz* are both the number (seven) and the configuration of the dental operating rooms. Gone are the standard dental units with bracket table, instrument console, and cuspidor; but the overhead-mounted dental lights and lounge-type chairs capable of turning, tilting, and sliding back and forth remain. Behind the diagonally-placed dental chairs are deck-mounted cabinets in which dental instruments and supplies are stored. In each cabinet, a utility corner provides air, water, and electricity outlets, a cuspidor, an air/water syringe, and high/low-speed suction equipment.

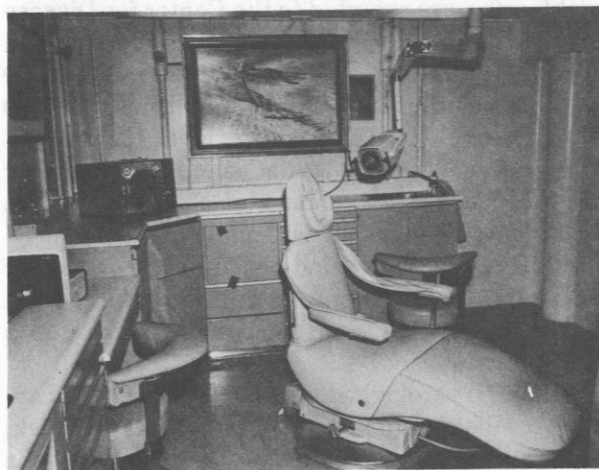
A nearby dental unit, installed beneath the cabinet top, contains both high- and low-speed air-driven instruments, between which is positioned an air/water syringe. Another nearby compartment holds the ultrasonic prophylaxis unit that is used for oral prophylaxis.

Each dental operatory has two sinks. Mounted on top of the cabinet is an autoclave. The dental operatories are also equipped with intercoms and

bulkhead-mounted X-ray viewers. In these operatories, the dental team delivers care from a seated position, with the patient in a reclined position. The most efficient four-handed dental delivery methods are followed.

The operatories are paneled in green, blue, and beige matching the color of the cabinets. Each office has piped-in music, scenic pictures and hanging plants. Stereo music and headphones are used in two operatories to reduce patient anxiety. The patient wears headphones during dental treatment, turns the music of his choice up to the level desired, and relaxes.

Any dental facility which supports several thousand people should have a prosthetics laboratory where crowns and fixed and removable partial dentures can be fabricated. The *Nimitz* Dental Department has acquired all the equip-

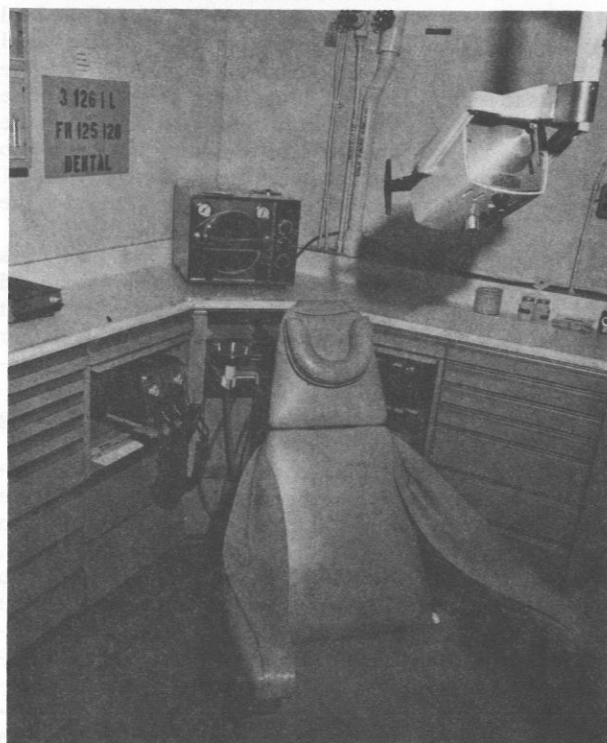


This is prosthetics dental operatory #1 in the USS *Nimitz*. The prosthetics laboratory is to the left.

CAPT Plump is the dental officer aboard the USS *Nimitz* (CVAN-68), FPO New York 09501.

ment necessary to provide complete prosthetic service, including porcelain jacket crowns. Mouthguards can also be constructed for patients involved in contact sports. The oral surgery spaces provided in the *Nimitz* enable the oral surgeon to handle most of the dental problems likely to occur at sea. Provided for the surgeon are nitrogen-propelled instruments, portable suction, blood pressure apparatus, and a head lamp. Portable oxygen is also available for use in the event of emergency situations. With this capability, the dental operatories can be used as secondary aid stations in general quarters situations.

Soon to be operational is a central sterilization room. This facility will receive and process all used or contaminated dental instruments and supplies. The department's instruments are color-coded to indicate the operatory to which they belong and the procedure for which they are used. In the central sterilization room, instruments are cleaned of debris, sharpened, and scrubbed in soapy water; then, following photographic or written guidelines, the technician prepares instrument packs on color-coded metal trays. Trays and



This is dental operator #3 aboard the USS *Nimitz*. Note the corner utility cabinet with cuspidor, saliva ejector, high-speed evacuation, and air-water syringe. An ultrasonic prophylaxis unit is in the cabinet aft. The Dentsply Trimod unit has high-speed and low-speed air-driven handpieces, and an air-water syringe.

contents are then sterilized and issued to the appropriate operator.

Another notable area within the *Nimitz* dental spaces is the X-ray suite. Contained within its confines are two X-ray machines (and their dual control panel), and manual and automatic X-ray developing machines. The 90 KVP X-ray machine produces standard periapical X-rays. The panoramic machine provides a 5" x 12" film of the entire skull, from eye-level down, allowing rapid diagnosis of fractures, cysts, and bone cancers, as well as other orofacial anomalies.

A military spare parts (MSP) cabinet located in the X-ray suite provides storage for thousands of small dental items, ranging from dental burs to hand instruments. This reduces the department's bulk storage requirements by eliminating considerable amounts of flammable packaging. Yet the dental supply technician is able to determine at a glance what supplies are on hand.

The *Nimitz* preventive dentistry room is one of the first such facilities ever built into a new ship. This space contains six sinks. Here the ship's crew is instructed in dental health care techniques. When completely fitted out, the preventive dentistry space will contain a phase contrast microscope linked to a television camera and monitor, as well as a cassette-projector with screen. In this room, some 84 people can be instructed each day in dental disease prevention techniques. Theoretically, this allows the Dental Department to cycle the full crew of 6,300 men through the Preventive Dentistry Program once each year. Two operatories are utilized some 14 hours each day by four dental technicians to provide oral hygiene treatment for 28 patients. These personnel receive oral prophylaxis and topical application of stannous fluoride.

Tied in with this program is a computer-based recall system which enables the dental officer to reappoint crewmen periodically for examinations, oral prophylaxis, or definitive dentistry. With this system, the dental officer can also quickly answer requests for the dental health status (classification) of the crew at any given time.

When the *Nimitz* is deployed with a full air group, one dental health delivery team will work in the evenings from 1400 to 2300 to provide dental services to the men whose schedules dictate such a need. This will assure that complete dental service is available to the entire crew of the *Nimitz* some 15 hours each day. Emergency care is provided around the clock.

BUMED SITREP

MEDICAL CORPS CELEBRATES

105TH . . . Navy Medical Department activities around the world will observe the Medical Corps' 105th anniversary on 3 March 1976. This date not only marks the anniversary of official legislative recognition of a Navy Medical Corps, but is also an appropriate occasion on which to commemorate 200 years of bringing health care to the nation's fleet.

Heading the list of celebrations is a sit-down dinner with champagne, ceremonies, entertainment, and dancing scheduled for Friday, 5 March 1976, at the Commissioned Officers' Mess (Open), National Naval Medical Center, Bethesda, Maryland.

Officers should wear dinner dress blue jacket or equivalent. Civilian guests are requested to wear black tie. Festivities begin at 1900.

Tickets are \$18 per person, and may be obtained from:

CDR R.E. Erwin, MSC, USN
Department of the Navy
Bureau of Medicine and Surgery
Washington, D.C. 20372

Make checks payable to: MC Anniversary Party Fund. For further information call: (202) 254-4311 or Autovon 294-4311.

SHIPBOARD BROMINATION

SYSTEM . . . BUMED continues to coordinate with the Naval Ship Engineering Center and the Naval Sea Systems Command on the installation and operation of shipboard bromination systems. During FY76, 55 surface ships are expected to be retrofitted, with over 500 ships altered by 1980. The system is also being installed in the DD-963 class vessels. In addition, BUMED is helping to prepare a training program for operators of bromination equipment.

EQUAL OPPORTUNITY—PHASE II

. . . Phase II of the BUMED Equal Opportunity Program is under way, with RADM E.J. Rupnik (MC) as command coordinator. A command training team has been named, and Actions to Counter Racism workshops are being held. A Medical Department affirmative action plan should be ready for distribution to the field by spring.

BUMED Equal Opportunity Program

specialist detachments have been established at NRMCMC Portsmouth and NRMCMC Oakland. Each detachment has been assigned an officer-in-charge with an anticipated complement of seven enlisted personnel.

BETTER COCKROACH CONTROL

. . . New techniques of cockroach control being tested at Naval Environmental and Preventive Medicine Unit #2, Norfolk, Va., have been remarkably successful. Within two hours of applying finely dispersed droplets of insecticides such as pyrethrum, the cockroach population aboard ship has been reduced nearly 90%. Better results are expected with more effective insecticides.

Current tests using a mixture of pyrethrins and dichlorovos are also promising. The pyrethrins serve as a flushing agent, while the dichlorovos vapors penetrate the hiding places of cockroaches.

CARDIOPULMONARY RESUSCITATION FILM . . .

The Department of the Navy has procured rights to reproduce the excellent cardiopulmonary resuscitation training film, "New Pulse of Life." Copies of this film are available for short-term loan from:

Naval Education and Training
Support Center—Pacific
Fleet Station Post Office Building
San Diego, California 92132

Naval Education and Training
Support Center—Atlantic
Naval Station, Building Z-86
Norfolk, Virginia 23511

Audiovisual Resources Division
Naval Health Sciences Education
and Training Command
Building 141
National Naval Medical Center
Bethesda, Maryland 20014

NFPA EMERGENCY PREPAREDNESS MANUAL . . .

Over the past 74 years, the National Fire Protection Association, a standards-making group formed in 1896 to combat the loss of life and property resulting from fires, has issued many standards governing building construction.

These are compiled into what is known as the Fire Codes.

Recently, the NFPA adopted a document entitled, "NFPA 3M—1975 Manual on Health Care Emergency Preparedness." This manual discusses the types of disasters that must be anticipated, response to a disaster, a typical disaster plan, implementation of a disaster plan, and the obligation of the governing body and staff of the health care facility. This 35-page manual may be of use to all commands. For further information write: NFPA, 470 Atlantic Avenue, Boston, Mass. 02210.

FLIGHT SURGEON SUPPORT OF MISHAP/EVALUATION BOARDS

. . . BUMED has recently become aware of less-than-adequate participation of flight surgeons in the functions of certain Aircraft Mishap Boards and Field Naval Aviator/Naval Flight Officer Evaluation Boards. Occasionally, lack of participation may be justified because of geographical separation. However, in the cases brought to BUMED's attention, the rationale was that the flight surgeon's patient load required his presence at the local medical facility. Apparently, routine clinical duties were considered more important than full participation in the boards. This reasoning is contrary to the requirements of OPNAVINST 3750.6K (para 111 and 112), and to the spirit of BUPERSMAN 3410300.2C.

All BUMED-managed activities must comply with both the intent and the spirit of these directives. Flight surgeons will be made available for full participation in Mishap/Evaluation Boards. This is considered a primary use of flight surgeon training and expertise.

The cooperation of non-BUMED-managed activities is sought to ensure the most efficient use of flight surgeon time while participating in the boards. If flight surgeons are not available to Board-convening authorities from their own assets, requests for assistance should be sent to local BUMED-managed activities. If support is subsequently not available or is not provided, the services of a flight surgeon may be requested from appropriate type commanders.

BUMED should be notified when less-than-optimal aeromedical support is provided to Mishap/Evaluation Boards.

Notes & Announcements

TRISERVICE STUDY ON MILITARY OPTOMETRY

The Surgeons General of the military departments last year directed an in-depth review of military optometry to identify issues applicable to the three services and to provide recommendations for uniform career patterns for optometrists. The Committee was comprised of two officers, one of whom was an optometrist, from each service.

The study showed that the career pattern of most optometry officers is not competitive for promotion beyond 0-4 when compared to other groups within the Medical Service Corps (MSC). Optometry is the second largest identifiable specialty in the Corps; yet in a promotion study completed in 1974 and covering a 10-year period, optometry ranked last, percentage-wise, among the six MSC sections in successful selection to senior grades. The triservice study also indicated a need for senior optometry officers to assume positions of responsibility in medical treatment facilities, and to participate more in the management and development of military optometry.

Since optometrists have the training and responsibility to detect any abnormal ocular conditions, and have the legal and professional obligation of making appropriate direct referrals to other health professionals, the study recommended that direct referral be an accepted practice throughout the services. This practice will enhance professional relationships between optometrists and other health care personnel.

To provide optimum vision care for eligible beneficiaries within limited professional resources, and to provide an acceptable career pattern for Navy optometry officers, it is recommended that commanding officers of naval regional medical centers and hospitals use optometry officers to their maximum capability, consistent with grade and experience. Commanding officers should carefully monitor fitness reports of optometrists to assure that well-qualified optometry officers are afforded adequate opportunity for selection to senior grades in the Medical Service Corps. In addition, direct referral of patients by optometrists is recommended.—BUMED Code 00.

OPN ITEMS AND LEASING

BUMED procedures for programming OPN (other procurement, Navy) systems and equipment requests permit items which have been approved but not obtained to be resubmitted in the next year's OPN requirements. From time to time, such requests have been routinely resubmitted and subsequently determined to be no longer required; or different items are desired and substitutions are made locally. Usually, these requests involve systems and equipment interfacing in administrative areas, but sometimes medical equipment is involved.

Leasing is also widely used in the systems and equipment field in certain categories, particularly administration. At times, after a system is leased under prior authorization, another, more adaptable and improved system is found. When a substitution is desired in leased systems and equipment, BUMED should be advised of the contemplated change, and given the rationale and a summary of operating experience with the present equipment or system. Quick copying, hospital communications, micromation, automated typing, and word processing systems are areas where the command's rationale for change and an appraisal of present capability is especially beneficial at both regional and Bureau levels. Such appraisals provide specific performance indicators to measure a system's effectiveness.

Naval regional medical centers and hospitals are urged to scrutinize systems and equipment requests which have been carried over into the following year OPN requirements. A review undertaken locally by the user will determine whether a valid requirement still exists, or whether a better item has become available. Routine resubmission of equipment requests without an up-date-reevaluation of an existing need should be avoided.

Commands are also encouraged to advise the Bureau of contemplated changes in systems and equipment leasing. Information concerning proposed new or alternate installations would be extremely useful to the Bureau when decisions must be made about equipment selection and budgeting.—BUMED Code 00.

CHANGES TO ROSTER OF KEY MEDICAL DEPARTMENT PERSONNEL

The September 1975 issue of *U.S. Navy Medicine* (66[3]:29) carried a roster of key Medical Department personnel at commands and medical activities worldwide. The changes shown below in bold should be noted on this roster:

1) Under COMNAVLOGISTICS: change AO to **LCDR J. Wilson, MSC, USN.**

2) Under COMNAVAIRPAC: change first name listed to **CAPT K.H. Reichardt, MC, USN.**

3) After COMNAVAIRPAC and before COMSUBPAC: add **COMSUBLANT CDR W.B. Maffey, MC, USN.**

4) Under CNATECHTRA (NAS Memphis, TN): change first name listed to **CAPT R.B. Lehman, Jr., MC, USN (ADDU).**

5) Under COMNAVSURFPAC: change first name listed to **CAPT J.W. Johnson, MC, USN.**

6) Under First Naval District: NAVREGMEDCEN Newport, RI: change DCS to **CAPT W.L. Williams, MC, USN.**

7) Under Fourth Naval District: NAVREGMEDCEN Philadelphia, PA: change DCS to **CAPT R.A. Baker, MC, USN.**

8) Under Fifth Naval District: NAVREGMEDCEN Portsmouth, VA: change Asst Dir HCA to **CDR L.H. Turbiville, MSC, USN.**

9) Under Sixth Naval District: NAVREGMEDCEN Jacksonville, FL: change DAS to **CAPT H.P. Miller, MSC, USN.**

10) Under Sixth Naval District: Naval Aerospace Medical Research Laboratory, Pensacola, FL: change CO to **CAPT R.E. Mitchel, MC, USN.**

11) Under Sixth Naval District: Naval Disease Vector Ecology and Control Center, Jacksonville, FL: change OIC to **CDR S.A. White, MSC, USN.**

12) Under Ninth Naval District: Naval Hospital Corps School, Great Lakes, IL: change Sr Nurse to **CDR C. Clunan, NC, USN.**

13) Under Tenth Naval District: NavHosp Guantanamo Bay, Cuba: change Ch Nurse to **CDR J. Rollins, NC, USN.**

14) Under Eleventh Naval District: NAVREGMEDCEN Long Beach, CA: change Ch Nurse to **CAPT A. Williams, NC, USN.**

15) Under Eleventh Naval District: NavHosp Port Hueneme, CA: change CO to **CAPT M.F. Tanner, MSC, USN.**

16) Under Twelfth Naval District: NavDisp San Francisco, CA: change XO to **CDR H.E. Daniel, MSC, USN.**

17) Under Thirteenth Naval District: NavDisp, NSA, Seattle, WA: change Sr Nurse to **LCDR V. Boyce, NC, USN.**

18) Under Naval District, Washington, DC: NAVREGMEDCLINIC, Washington, DC: change XO to **CAPT H.H. Coulson, MSC, USN.**

19) Under Italy: Naval Environmental and Preventive Medicine Unit #7, Naples, IT: change OIC to **CAPT R.L. Marlor, MC, USN.**

20) Under Philippines: NavHosp Subic Bay, ROP: change Ch Nurse to **CDR E.A. Barker, NC, USN.**

21) Under Headquarters Marine Corps and Fleet Marine Force: First Marine Aircraft Wing: change "vacant" to **CAPT P.C. Bigler, MC, USN.**

—BUMED Code 311A.

COMING IN MAY: NAVY PSYCHIATRY SEMINAR

The annual Navy Psychiatry Seminar will convene 8 May 1976 in Miami Beach, Florida, preceding the APA Convention. Drafts of proposed papers should reach BUMED Code 313 by 15 March 1976. Time and place of the traditional "Navy Nervous Doctors" luncheon will be announced as soon as arrangements are completed.—BUMED Code 313.

253 CORPSMEN SELECTED FOR ADVANCED TRAINING

The "C" School Selection Committee met for the first time last December to select hospital corpsmen for advanced training beginning July through September 1976. The results of the committee's deliberations are shown on page 29.

Many applicants who fully met the eligibility criteria for the course of instruction requested could not be selected because of limited quotas. All corpsmen who request advanced training are therefore encouraged to indicate a first and second choice of school. Applicants who did not meet the eligibility criteria for further training should be counseled regarding the criteria and encouraged to take corrective action. The number of highly qualified applicants and the competitive selection process preclude favorable consideration of personnel who require general classification test/arithmetical (GCT/ARI) waivers, have poor performance evaluations, or have a recent history of disciplinary problems.

Course	Number of Requests	Quota	Number Selected
Nuclear Submarine Technician (8402)	5	60	5
Aerospace Medicine Technician (8406)	8	40	4
Nuclear Medicine Technician (8407)	0	4	0
Cardiopulmonary Technician (8408)	18	4	4
Aviation Physiology Technician (8409)	2	3	2
Clinical Nuclear Medicine Technician (8416)	7	3	3
Medical Services Techni- cian (Independent Duty Technician) (8424)	49	26	24
Preventive Medicine Technician (8432)	19	31	10
Transplantation Technician (8433)	11	0	0
Ocular Technician (8444)	0	5	0
Otolaryngology Technician (8446)	4	5	4
X-ray Technician (8452)	35	34	24
Electroencephalography Technician (8454)	1	4	1
Optician Technician (8463)	2	0	0
Physical and Occupational Therapy Technician (8466)	30	12	12
Medical Photography Technician (8472)	0	0	0
Biomedical Equipment Tech., Basic (8477)	26	10	10
Biomedical Equipment Tech., X-ray (8478)	2	3	2
Biomedical Equipment Tech., Electronic (8479)	1	6	1
Pharmacy Technician (8482)	12	20	12
Operating Room Technician (8483)	25	84	21
Neuropsychiatry Technician (8485)	9	41	9
Urology Technician (8486)	0	6	0
Special Operations Technician (8492)	0	20	0
Medical Deep Sea Diving Technician (8493)	4	15	3
Dermatology Technician (8495)	7	4	3
Laboratory Technician, Basic (8501)	26	48	20
Histology Technician, Basic (8502)	0	3	0
Cytology Technician, Basic (8504)	1	6	1
Cytotechnology Technician (8505)	3	4	3
Medical Laboratory Tech- nician Advanced (8506)	50	61	50
Medical Technologist Technician (8507)	27	26	25
Total	384	588	253

Command career counselors should review the above information and make a special effort to recruit qualified applicants for training in areas where requirements still exist. Applicants should be made fully aware of the training and duties required in the respective fields. Such awareness *cannot be overemphasized*, since the comment, "I didn't know what this training was all about" is heard too often from students after they are enrolled in training.

The committee will meet again in March 1976 to select students for classes beginning in October and December 1976. The committee will also meet twice every month to consider applicants who have requested training in specialties where quotas remain unfilled.

The above statistics reflect data pertaining to requests received during a five-week period. Future reports will present data on requests received during a three-month period.—BUMED Code 34.

VADM CUSTIS PROPOSES AMSUS TASK FORCE

In opening remarks at the 82nd Annual Meeting of the Association of Military Surgeons of the U.S. (AMSUS), Navy Surgeon General VADM D.L. Custis (MC) called for the formation of a representative task force "to reappraise all aspects of AMSUS—its very name, its purpose and objectives, its organization and *modus operandi*."

After hailing AMSUS as an organization of "incomparable potential," VADM Custis said that the organization must define its mission and direct its energies toward solving serious problems besetting the federal medical services. "This association could speak for over 20,000 physicians, 6,000 dentists, 10,000 nurses, and 12,000 medical administrators and allied scientists," the Surgeon General said, noting that the current membership of 8,000 was larger than that of many influential medical groups.

"How presumptuous of us to solicit the advocacy of the other associations—the AMA, AHA, ANA, AAMC, our society of medical consultants, and the multiple military and Reserve associations—when we do so little by ourselves with our own association," VADM Custis said.

The Surgeon General was one of four Navy Medical Department officers honored during the five-day meeting, held 10-14 December 1975 in

Washington, D.C. At the annual banquet, VADM Custis received the AMSUS Founder's Medal in recognition of his faithful and effective service as Surgeon General of the U.S. Navy, and his outstanding influence and leadership in the Association.

Other awards went to:

- CAPT Angelo R. Petoletti (MSC), chief of the Pharmacy Service at NRMC Oakland, recipient of the Andrew Craigie Award "for notable contributions in clinical pharmacy in relation to primary health care services." This award consists of a silver plaque and a \$500 honorarium.
- CDR Gary L. Pease (MC), from the Otolaryngology Department at NRMC San Diego, recipient of the Federal Medical Residents' Award for academic and technical accomplishments and original research in otolaryngology. This award consists of a plaque and honorarium of \$500.
- LCDR John R. Lucas (MSC) of NRMC San Diego, recipient of the Sir Henry S. Wellcome Medal and Prize for best essay related to military medicine. His essay, "A Survey of Drug Formulary Procedures in Naval Hospitals and the Feasibility of Change," won for him a silver medal, scroll, and \$500 honorarium.

EQUIPMENT: WHAT ARE WE GETTING?

As do other government agencies, the Navy tries to procure equipment at the lowest price. But those who do the procurement are not always knowledgeable about equipment quality. Individuals who need equipment must help the supply officer obtain the best product. If several manufacturers make the same equipment, each item should be researched carefully to determine desirable and essential features, as well as cost tradeoffs.

The system operates under several constraints, one of which is central procurement. Say you want a sterilizer. Sterilizers from six different manufacturers are all carried under the same stock number, and you may be issued any one of them. Should you desire the product of a specific manufacturer, you must justify your request either by size, capacity, or some other feature that makes the item unique.

If you have a question concerning equipment, there are three sources of information:

- Specialty consultants to the Navy Medical Department, all of whom are located at the

National Naval Medical Center, Bethesda, Maryland 20014 (except as noted):

Specialty	Consultant	BUMED Code
Allergy	CDR H.A. Mangold (MC)	31Z
Anesthesiology	CAPT R.E. Tobey (MC)	31L
Dermatology	CAPT W.M. Narva (MC)	31N
Family Medicine	CDR R.W. Higgins (MC)	31Y
	NRMC Charleston, S.C.	
Gastroenterology	CDR R.B. Johnson (MC)	31X
General Surgery	CAPT W.J. Fouty (MC)	31B
Internal Medicine	CAPT D.O. Castell (MC)	31M
	(Includes cardiology, hematology, and diseases of the chest)	
Medical Allied Sciences	CDR J.A. Spahn, Jr. (MSC)	31U
	BUMED, Rm. 7010	
Neurology	CAPT W.L. Brannon, Jr. (MC)	31W
Neurosurgery	CAPT C.B. Early (MC)	31H
Obstetrics/Gynecology	CAPT D.R. Knab (MC)	31F
Ophthalmology	CAPT L.H. Seaton (MC)	31D
Optometry	CAPT D.E. Still (MSC)	31C
	BUMED, Rm. 5204	
Orthopedics	CAPT B.K. Slemmons (MC)	31G
Otolaryngology	CAPT H.O. DeFries (MC)	31E
Laboratory Medicine	CAPT C.J. Stahl (MC)	31S
Pediatrics	CAPT D.W. Bailey (MC)	31Q
Pharmacy	CAPT T.W. Tober (MSC)	31P
Physical Medicine	CAPT B.K. Slemmons (MC)	31T
Plastic Surgery	CAPT W.C. Dempsey (MC)	31J
Psychiatry	CAPT R.W. Steyn (MC)	313
	BUMED, Rm. 2201	
Radiology	CAPT Q.E. Crews, Jr. (MC)	31R
	NRMC San Diego, Calif. 92134	
Thoracic Surgery	CAPT Mitchell Mills (MC)	31V
Urology	CAPT Mitchell Edson (MC)	31K
AFIP matters	CAPT M.J. Valaske (MC)	
	NRMC San Diego, Calif. 92134	---

- CAPT O. Stallings (MSC), commanding officer, Naval Medical Materiel Support Command, 3500 South Broad St., Philadelphia, Pennsylvania 19145.

- CDR J.P. Swope (MC), head, Biomedical Engineering Branch, Facilities Division, Bureau of Medicine and Surgery (Code 416), Navy Department, Washington, D.C. 20372.

After the item is received and in use, if it does not fulfill requirements, or if it is an outright hazard, fill out a Defective Materiel Report. Describe the situation and tell exactly why the equipment does not meet your needs. Preparation of this report is described in Joint NAVMEDMAT-SUPPCOMFMSO Instruction 6700.16H, which includes DD Form 1899, Reporting and Processing Medical Materiel Complaints.—BUMED Code 416.

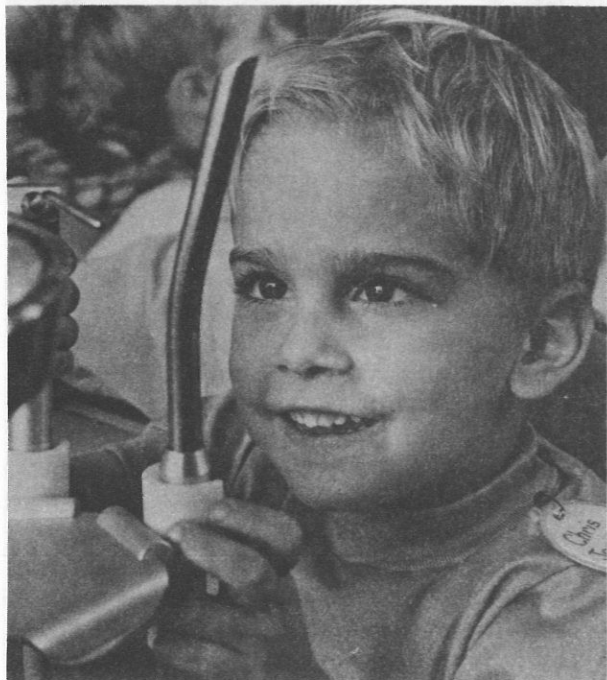
PRE-SCHOOLERS IN HAWAII LEARN ABOUT DENTAL HYGIENE

More than 50 pre-school children from NAS Barbers Point, Oahu, Hawaii, got a first-hand look at a dentist's office and a ride aboard the U.S. Navy's largest ferry last October when they were the guests of the Ford Island Dental Department.

The children—all three to five years old—boarded the ferry at Pearl Harbor and rode across the harbor to Ford Island. From the deck, the children, their parents, and their teachers got a close look at the USS *Arizona* Memorial and the ships moored in the harbor. The visitors were greeted by members of the Dental Department when they arrived at Ford Island.

LCDR Robert A. Scudder, Jr. (DC), officer in charge of the 12-man dental staff at Ford Island, said, "From a professional standpoint, we are interested in showing youngsters what dentistry is all about. There is no better way to do this than by letting them come to a dental facility and see for themselves."

He continued, "Letting the children see the equipment and actually handle the instruments helps them develop a healthy attitude toward dentistry and, we hope, a healthy respect for good oral hygiene."—Story and photos by PH2 Ron Garrison, PAO, Third Fleet.



During a school visit to the Ford Island Dental Department, a youngster is fascinated by his discovery of an aspirator.

DENTAL CONTINUING EDUCATION COURSES SET FOR APRIL

The following dental continuing education courses will be offered in April 1976:

National Naval Dental Center, Bethesda, Maryland

Occlusion 5-9 April 1976

Periodontics 26-30 April 1976

Naval Regional Dental Center, Norfolk, Virginia
Navy Dental Corps Casualty

Treatment Training Course 5-9 April 1976

U.S. Army Institute of Dental Research, Walter Reed Army Medical Center, Washington, D.C.

Oral Diagnosis and

Therapeutics 12-15 April 1976

BUMEDNOTE 1500 of 12 June 1975 should be consulted when applying for dental continuing education courses, with the exception of courses administered by the Commandant, Eleventh Naval District. The latter requests should be submitted to the Commandant, Eleventh Naval District (Code 37).

Cross-country travel for dental continuing education courses and professional conferences will generally not be approved because of funding limitations. Similarly, travel from outside CONUS will generally not be approved.—BUMED Code 6.

CHINA: DENTAL SERVICES IN JOINT SYMPOSIUM

In a continuing effort to exchange ideas and philosophies concerning the practice of dentistry with dental officers of the Republic of China armed forces, the U.S. Navy Headquarters Support Activity (HEDSUPPACT) Dental Department, Taipei, Taiwan, hosted an all-day symposium on preventive dentistry in September 1975.

Through the offices of Major General Teng, Surgeon General, Ministry of National Defense, Taiwan, 32 dental officers representing Army, Navy, Air Force, Taiwan Garrison, and Tri-Service Medical Center, Republic of China, were nominated to attend.

The symposium opened with welcoming remarks by CAPT Jerome E. Grause, commanding officer of HEDSUPPACT. CAPT Samuel Sha, MC,

CN, and CAPT Homer S. Samuels, DC, USN, dental officer, HEDSUPPACT, cooperated in plans for this education endeavor.

Emphasis was placed upon recognition of dental plaque and the management of dental caries and periodontal disease. The use of fluorides as anti-cariogenic agents was also discussed. Lectures were supplemented with the U.S. Navy Dental Corps' latest movies on preventive dentistry.—BUMED Code 6.

FLIGHT SURGEONS TRAIN IN JETS

A "Blue Chip" class of 28 flight surgeons graduated from jet flight training at Training Squadron FOUR, NAS Pensacola, Florida on 18 December 1975—the first flight surgeon class to train in jets.

Flight surgeon candidates normally undergo a three-week aviation officer orientation course followed by approximately four months of academic and medical training at the Naval Aerospace Medical Institute and six weeks of flight training at Saufley Field in T-34 Mentors. The "Blue Chip" class deviated from the traditional syllabus to include training in jet aircraft.

Upon arriving at TRARON FOUR in November, only two of the candidates had previous flight experience. All, however, proved quick to adapt to the task, some distinguishing themselves in acrobatics. The course of instruction included a "shot-gun" solo, in which the instructor takes over the controls only if the student appears to need help. The flight surgeon is not qualified as a pilot, but is trained to understand the stresses and environmental conditions encountered by an aviator during flight.

The diverse class consisted of 24 U.S. Navy physicians, one Army major, and representatives from Argentina, Germany, and Iran. Navy members of the "Blue Chip" class will serve at shore establishments, and on aircraft carriers in squadron situations. One member of the group applied for the astronaut program as a prospective candidate for the space shuttle.

At the end of training, CDR Jerald Felder (MC), senior member of the class, said, "I have many hours in the back seats of military jets, but nothing equals the experience of controlling a jet from the front seat. I feel I am now much better qualified to understand and treat the problems of Navy pilots."—PAO, NAMI, Pensacola, Fla.



LT James Gessler (MC), a member of the "Blue Chip" class of student flight surgeons, prepares for a flight with VT-4 flight instructor LT Russ Campbell. (Photo by Jeff Padell.)

APPLICATION PROCEDURES FOR USUHS SCHOOL OF MEDICINE

The School of Medicine of the Uniformed Services University of the Health Sciences (USUHS) is accepting applications for admission to its charter first-year class of 36 students. The class is scheduled for enrollment at the University in August 1976.

The School of Medicine will offer a four-year comprehensive medical education to young men and women who, in addition to being outstanding candidates for medical school, demonstrate potential for and commitment to careers as medical officers in the Navy, Army, Air Force, and Public Health Service.

Major clinical experiences for students will be obtained at the National Naval Medical Center, Walter Reed Army Medical Center, and Malcolm Grow USAF Medical Center, all located near Washington, D.C. Students will have additional learning experiences at the National Institutes of Health, the Armed Forces Institute of Pathology, Walter Reed Army Institute of Research, the Naval Medical Research Institute, the Center for Disease Control, the Armed Forces Radiobiology Research Institute, and the Army Medical Research Institute of Infectious Diseases.

Students will receive Reserve commissions as second lieutenants in the Army or Air Force, or as ensigns in the Navy or Public Health Service; they will be on active duty during their four years of schooling, receiving full pay and benefits.

There is no tuition for attending the School of Medicine, and books and equipment are provided. Upon graduation, students can expect to receive Regular commissions and be promoted to captain in the Army or Air Force, or lieutenant in the Navy or Public Health Service. Graduates are obligated for seven years of active duty following completion of the program. Time spent in internship or residency training is not creditable toward satisfying this service obligation.

Both civilians and military personnel may apply for admission. Basic requirements include a baccalaureate degree prior to matriculation and completion of the following prerequisites: one academic year each of general chemistry, organic chemistry, physics, biology, and mathematics; and six semester hours of college-level English. Applicants must be citizens of the United States, must be no older than 28 years as of 30 June 1976, and must meet the physical and personal qualifi-

cations for a commission in the uniformed services. All applicants must have taken the Medical College Admission Test (MCAT).

The School of Medicine will have its own application materials and will require the submission of MCAT results, official transcripts, letters of recommendation, a service preference statement, and a personal statement. Interviews will be given to selected applicants, with final decisions being made by an admissions committee composed of the medical school faculty. Final selection will be based on an overall appraisal of the personal and intellectual characteristics of the applicants without regard to sex, race, religion, national origin, or state of residence.

Interested individuals may request application materials from: Director of Admissions, Uniformed Services University of the Health Sciences, 6917 Arlington Road, Bethesda, Maryland 20014.

The School of Medicine has not as yet received provisional accreditation from the Liaison Committee on Medical Education. Accreditation as a new school is anticipated in June 1976. If the School of Medicine does not receive provisional accreditation, enrollment of the charter class will be delayed until such accreditation is obtained.

AMA SETS DUES FOR MILITARY PHYSICIANS

No sooner did *US Navy Medicine* announce that free membership in the American Medical Association was available to Navy medical officers (US Nav Med 66[4]:19, Oct 1975) than the AMA policy changed. Under new rules set last November by the AMA House of Delegates, military physicians must pay annual membership dues. For further information, contact: American Medical Association, 535 North Dearborn St., Chicago, Illinois 60610.

US Navy Medicine regrets any inconvenience the announcement may have caused our readers.

OTOLARYNGOLOGY BOARD SETS EXAM

The American Board of Otolaryngology will hold its next certifying examination 23-27 October 1976 at the Palmer House in Chicago, Illinois. The deadline for applying for this examination is 1 May 1976.

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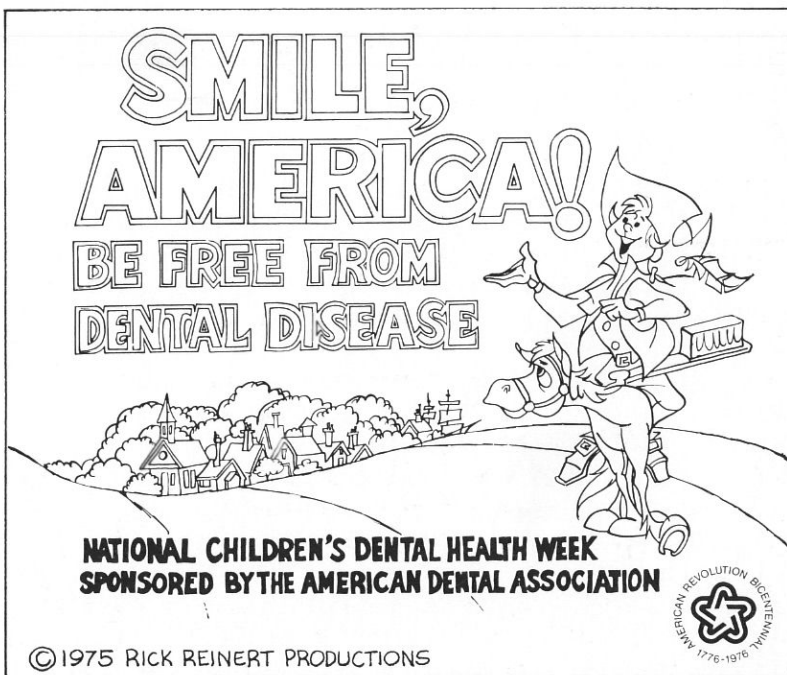
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NATIONAL CHILDREN'S DENTAL HEALTH WEEK OBSERVED

"Smile America! Be Free from Dental Disease" was the theme of the 1976 National Children's Dental Health Week, observed 1-7 February. The week is sponsored annually by the American Dental Association to encourage good oral hygiene among the nation's youth.

The Navy Medical Department actively supports this week as a benefit to the future health of the nation. Dental activities around the world sponsor programs of dental health education, with many Navy dental personnel volunteering their services. Programs are designed and conducted so as not to interfere with the primary mission of any activity.

This year, the theme of National Children's Dental Health Week was tied to the American Revolution Bicentennial celebration. A cartoon character of Yankee Doodle was used by the ADA in television public service messages, posters, calendars, and other educational materials.



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